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# The Province of Alberta

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IN THE MATTER OF "THE NATURAL  
GAS UTILITIES ACT"

—and—

IN THE MATTER OF an Enquiry into  
Scheme to be adopted for Gathering,  
Processing and Transmission of  
Natural Gas in Turner Valley

---

G. M. BLACKSTOCK, Esq., K.C., *Chairman*

Dr. E. H. BOOMER, F.C.I.C., *Commissioner*

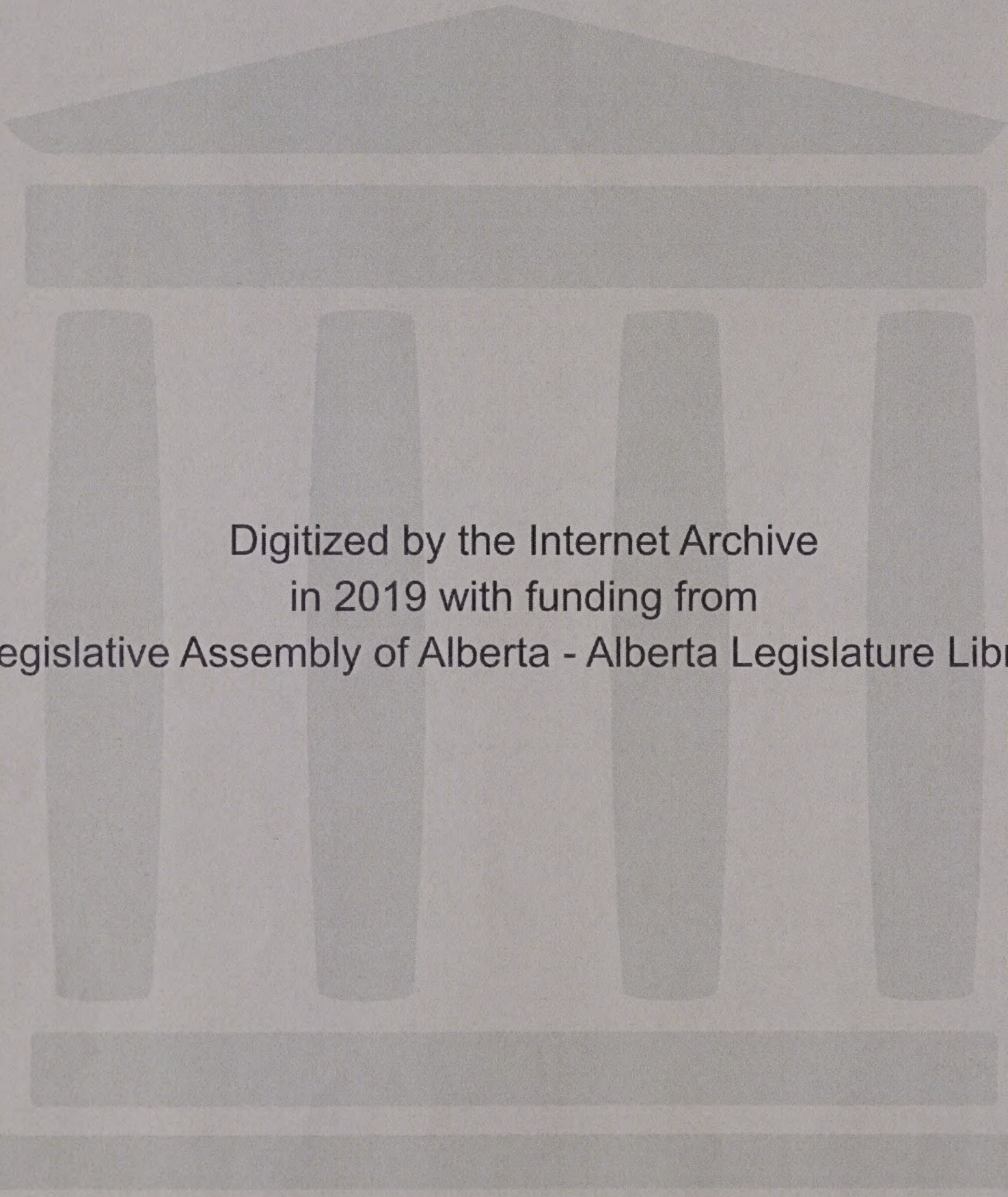
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***Session:***

CALGARY, Alberta June 17th, 1946

VOLUME 87





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C-1-1 10 A.M.

Argument by Mr. McDonald.

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Monday,  
June 17th, 1946.

THE CHAIRMAN: All right, Mr. McDonald.

MR. McDONALD: When we closed down on Friday, sir, I had filed Exhibit 188.

MR. CHAMBERS: Which is that?

MR. McDONALD: That is the Allocation of Gathering Costs in the British American area.

THE CHAIRMAN: I did not get a copy of it.

MR. McDONALD: Just a moment, I have one here, sir.

(Copy handed to the Chairman.)

Now I would like to explain this Exhibit, which is almost self-evident.

I have taken the charges on the basis of my own calculations as set out in Exhibit 187 for the year 1945, that is I have called the gathering unit the "high pressure gathering lines", the "low pressure gathering lines" and the "low pressure compressor", and the combined direct operating and administration charges for those three units amount to \$76,527.00. I have allocated the first 15% to the absorption plant and I have divided the balance of 85% equally,  $42\frac{1}{2}\%$  to the absorption plant and  $42\frac{1}{2}\%$  to the consumer or market end.

Now on the volumetric side, that is the total of the direct operating . . . . .

Yes, pardon me, this is the total of the direct operating and administration. I was in error there, Mr. Cutler, and you might correct it now. It would be easier for the record. The total of depreciation and return amounted to \$76,527.00.



All right, Mr. McDermott.

Now we moved down on Friday, sir. I

had filed Exhibit 125.

MR. McDERMOTT: When is that?

MR. McDERMOTT: That is the Allocation of Operating

Costs in the United States area.

THE CHAIRMAN: I did not get a copy of it.

MR. McDERMOTT: I have one here, sir.

(Copy handed to the Chairman.)

Now I would like to explain this Exhibit.

What is it about, sir?

I have taken the charges on the basis of

my own calculations as set out in Exhibit 127 for the year

1945, that is I have used the gathering rate and "high

pressure gathering lines," the "low pressure gathering lines"

and the "low pressure compressors," and the combined direct

operating and administration charges for those three units

amount to \$76,527.00. I have allocated the first 10% to the

absorption plant and I have divided the balance of 90%

equally, 45% to the absorption plant and 45% to the com-

pressor or packed end.

Now on the volumetric side, that is

the total of the direct operating . . .

Yes, pardon me, this is the total of the

direct operating and administration. I was in error there.

Mr. Chief, and you might correct it now. It would be correct

for the record. The total of direct operating and adminis-

tration is \$76,527.00.



Argument by Mr. McDonald.

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Dividing that, the total of the direct operating and administration charges for the three units amounted to \$39,063.00. I divided this on the straight volumetric proportionment, \$5,859.00 to the absorption plant and \$33,204.00, or 85%, to the consumer.

Now, sir, I would point out that this allocation is different from that submitted by the British American Company in their Exhibit 184 and the difference lies in that I have divided the 85% equally between the absorption plant and the consumer on the demand side of the costs, whereas in the British American submission, the division of the 85% is on the volumetric side.

MR. HARVIE: This is different also, Mr. McDonald, from your witness' evidence, Mr. Zinder.

MR. McDONALD: Well, I was going to comment on that now and set out what I consider are the reasons for this type of allocation as contrasted to any other type as may be advanced.

We must, Mr. Chairman, admit that this is a difficult problem. . . . .

THE CHAIRMAN: Is it any worse than any of the others?

MR. McDONALD: Well, even a little worse, I would say.

We must look at all of the circumstances in connection with the installation of the low pressure system in the British American area, and I think it can be fairly said that when the installations were ordered by the Board, representations had been made that the gas gathered as a result of the installations would be available for the market.

It would also be available for the British American Plant and as a result thereof, of the sale



Division Board, and that the direct

costs of the project are estimated to be \$1,000,000.

Estimated as \$1,000,000. I divided this on the basis

of the project's importance, \$1,000,000 to the project's

and \$1,000,000 to the project's

cost, and I would point out that this

allocation is different from that suggested by the project

division board, in that it is \$1,000,000 and the difference

lies in that I have divided the cost equally between the

project's importance and the project's

cost, whereas in the project's division board, the

division of the cost is of the project's

cost. This is different from Mr. McDonald's

division of the cost, which is \$1,000,000 to the project's

cost, and \$1,000,000 to the project's

cost, and I would point out that this

allocation is different from that suggested by the project

division board.

The cost, Mr. Chairman, is that this

is a \$1,000,000 project.

It is at any rate, that one of the project's

cost, and I would point out that this

allocation is different from that suggested by the project

division board, in that it is \$1,000,000 and the difference

lies in that I have divided the cost equally between the

project's importance and the project's

cost, whereas in the project's division board, the

division of the cost is of the project's

cost.

It would also be available for the

project's importance and the project's



of the gas and the natural gasoline therein contained, that the producer would benefit, particularly that producer who had to make use of the low pressure installations.

Now the first thing I should say is this: that, in the original discussions before the Board, the high pressure gathering system of the British American area as dealt with by Mr. McCutchin was not to be included in the rate base for, particularly for market purposes.

Now subsequent to that, and arising out of the discussions, as I understand it from Mr. Donellan's evidence, it was thought to include the high pressure system in the entire scheme and I agree with that for this reason, that I think that any installations which are of service and are of use and useful in delivering the gas should be under the Act and as a practical business expedient included in the rate base and in my allocation I have included the high pressure gathering installations at my rate of value which I have given to them.

Now at the early . . . . .

MR. STEER: Did I understand you to say, Mr. McDonald, that the Board had given some approval to that?

MR. McDONALD: No, there was some discussion with the Board.

MR. HARVIE: I think the Act gave a direction that they had to be included.

MR. STEER: I just wanted to know whether the Board had approved that.

MR. McDONALD: No, you will find in Mr. Donellan's evidence that there were conferences with the Board in Edmonton and I think you will find on Mr. Donellan's statement, which







Argument by Mr. McDonald.

- 7047 -

he read into the record, that he was advised just as Mr. Harvie has now expressed it, that the Act itself contemplated that those installations would be included in the rate base of the utility company.

Now in the primary stages, too, the matters which were discussed were the questions of the benefit to the parties but we find when we get on into estimating or assessing those benefits or to discussing those benefits, that none of the witnesses was prepared to make any statement on which the Board could make any reasonable assessment.

It was pointed out by Mr. McCutchin in the early stages that any net operating profits or result for the absorption plant could not be calculated or anticipated. The evidence arising out of the cross-examination of Mr. Zinder, when the same problem was discussed with him, appears to lead to the conclusion that over the whole term of years, the absorption plant may or may not actually derive a calculated benefit. Similarly Mr. Davis, on cross-examination, appeared to admit that such might be the case.

Those were the references which I made on Friday while dealing with this whole problem of allocation, so then we are left, as I see it, with arriving at some apportionment, having in mind actually what has transpired in this area and what will take place in the future.

Now I am going to concede, sir, that the producers in the South End favoured the introduction of this system because it did actually make available for them a market which they otherwise may not have had. They are the vendors of a commodity and as such will derive a benefit in







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the sales price which they would eventually receive.

When it comes to the apportionment of the cost, if my theory of value or method of arriving at the value of the gas is applied by the Board, it will naturally follow that any of the costs which are assessed in this allocation against the consumer or market interest, will be deductible, as it were, from the net amount, I am sorry, from the gross amount of money which is available for the sale of the product at the outlet of the scrubbing plant and to the extent that any additional costs are reflected in the decreased price of the gas at the well-head, the producer is then bearing his just proportion of such costs.

The problem then, in my way of thinking, rests on the matter of allocation between the absorption plant and the market or the consumer interest.

Now when you look at this South End installation we find that the low pressure system deals mainly with crude oil gathered, the crude oil gathering, and it is in operation continuously. It is not affected by market demands. In other words, all of the gas gathered and treated through the plant and that which is not required currently for the market, is repressured. It therefore follows to me that there is not, on this gathering system, the peak load market demand comparable with the requirements of the gathering system in the Madison area.

It follows, then, that gas is being required for the two purposes, the market and absorption plant purposes, in an even amount every day in the year and therefore the demand should be divided equally between the two markets.







M-1-1 - 10.15 A.M.

Argument by Mr. McDonald.

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And in this division I would point out that the actual investment cost, represented by the amortization charges, is being borne equally by the absorption plant and the consumer. Similarly the other capital charge, interest on money invested, is being borne equally.

Now dealing with the volumetric side, that is the operating costs, I can see no reason why there should be any departure from the ordinary system of allocation of cost based on volume and therefore I have remained with the straight 15% and 85% allocation.

Now on my figures as submitted in Exhibit 187 you will note that I have calculated the cost to the absorption plant of \$49,862.00 in 1945.

MR. HARVIE: That is Exhibit 188 ?

MR. McDONALD: In Exhibit 187, Page 3. The portion to be recovered from the absorption plant \$49,862.00.

Now if the same method of apportionment was used as applied to Exhibit 184, those charges would be on my figures \$33,940.00 an additional difference to the absorption plant on my allocation of approximately \$16,000.00.

In 1946, the comparative charges are \$47,451.00 and \$32,296.00, a difference of approximately \$14,000.00.

In 1947, the difference is \$45,039.00 and \$32,668.00, a difference of approximately.....

THE CHAIRMAN: Where did you get that last figure ?

MR. McDONALD: The \$32,668.00 ?

THE CHAIRMAN: Yes.

MR. McDONALD: Well no, that is a calculation which I have made of the allocated costs as the British American



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Argument by Mr. McDonald.

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submission is.

MR. HARVIE: That is, there is no place we can look for those figures ?

MR. McDONALD: No.

MR. HARVIE: You have calculated them ?

MR. McDONALD: Yes, I have calculated them the same way as your formula. I can give you the working papers.

In 1948 the charges are \$42,626.00 as contrasted to \$32,039.00, a difference of approximately \$10,000.00.

Now my submission, sir, is that this allocation is one that takes into account the equities between the parties and I think fairly apportions the cost of the low pressure gathering to which has been added the high pressure gathering in the British American area.

To sum up, the absorption plant would assume 57 $\frac{1}{2}$ % of the cost of the capital charges and 15% of the volumetric of the operating expenses.

Now you will note, sir, in my Exhibit 187 I have not included in my yearly calculations any apportionment of allocation of costs to repressuring. It is my submission that these costs are overall costs to be paid by the consumer in any event, and I have not carried in that statement through the necessary deductions, the calculations to show the costs attributable to the repressuring or storage in that area or in the Madison area. I will deal with that as a separate argument.

Nor have I dealt in my submission with regard to the British American Company, with the Gas & Oil Refinery and with transmission charges, that is the charges to be paid to the British American Company.







Argument by Mr. McDonald.

- 7051 -

Mr. Donellan revised the submission of the British American Company in regard to these charges. I now feel that the method that he has followed is reasonable and does reflect the equities as between the two parties.

The problem arising out of this allocation is only of importance in the event that the value of gas at the well head should be established by the Board on some basis of relevant cost of gathering and transmitting.

I might state, in order to bring the costs which I have been mentioning, in line with the whole of my submission, that is the rate base to be dealt with on the basis of 7% return that on my calculations the annual charge to be paid by the British American Company for transmitting gas in 1945 would have been \$7,861.00 as contrasted to the figure set out in Exhibit 184, \$10,225.71.

Now, sir, that brings me to the question of the Gas & Oil Refineries Limited gathering costs. Now with respect to those costs the same proposal which I make with regard to the British American high pressure lines applies, namely, that the gathering system of the Gas & Oil Refineries Limited is in effect part of the overall system in the field and that the Gas & Oil Refineries Limited are entitled to compensation for the service which is rendered by them in dealing with gas that eventually does reach the market.

In Exhibit 171, the Gas & Oil Refineries Limited submitted that the capital value of the wet gas gathering lines to be \$184,199.22, based on the appraisalment by the General Appraisal Company Limited of Vancouver made in September 1942.

Depreciation was calculated on a throughput



Introduction

The purpose of this study is to investigate the effects of various factors on the growth and development of the human body. The study is designed to provide a comprehensive overview of the physical and physiological changes that occur during the human life cycle, from birth to old age. The research is based on a review of the existing literature and the results of various experiments and observations. The study is organized into several sections, each dealing with a different aspect of human growth and development. The first section discusses the general principles of growth and development, including the role of genetics and environment. The second section deals with the growth and development of the skeletal system, including the process of ossification and the changes in bone structure and density. The third section discusses the growth and development of the muscular system, including the process of muscle fiber growth and the changes in muscle strength and endurance. The fourth section deals with the growth and development of the cardiovascular system, including the changes in heart size and function and the development of the blood vessels. The fifth section discusses the growth and development of the respiratory system, including the changes in lung size and function and the development of the airways. The sixth section deals with the growth and development of the digestive system, including the changes in stomach and intestinal size and function and the development of the digestive enzymes. The seventh section discusses the growth and development of the reproductive system, including the changes in the size and function of the reproductive organs and the development of the reproductive hormones. The eighth section deals with the growth and development of the nervous system, including the changes in the size and function of the brain and the development of the peripheral nerves. The ninth section discusses the growth and development of the endocrine system, including the changes in the size and function of the endocrine glands and the development of the endocrine hormones. The tenth section deals with the growth and development of the immune system, including the changes in the size and function of the immune organs and the development of the immune response. The study concludes with a summary of the findings and a discussion of the implications for human health and disease.



Argument by Mr. McDonald.

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basis taking the estimated figures as set out I think in Exhibit 47, declining the reserve at the rate of 10% per year and on a return of 15.83% net costs of gathering were set at 1.3797 cents per MCF.

Now the Company in its submission suggested that the costs of gathering wet gas should be included as part of the operating costs of the absorption plant but that the revenue derived from the sale of residue dry gas should be added to revenue derived from the sale of absorption gasoline and other products and the total divided eighty parts to the Company and twenty parts to the producer.

Alternatively, the Company suggested that the gathering costs be borne by the absorption plant and the return of dry gas content be divided equally between the producers and the Company.

Now what I must say in regard to both of those proposals, Mr. Chairman, is this, that neither of them is acceptable to the producers.

The proposals are not in accordance with the principles set out in the Act, namely the fixing of the value of the gas at the well head and the net results so far as the producers are concerned would be that the price received from the gas, if any, would be fixed, not with regard to the value of the gas itself but with regard to the value of the natural gasoline costs which have no relation to the costs of distributing the gas and I feel there is no reason why the producers of gas in the Gas & Oil Refineries area should not be dealt with on exactly the same basis as the other producers in the field.







M-1-5

Argument by Mr. McDonald.

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Alternately to the above suggestion Mr. Scrimgeour, in giving his evidence suggested that his company would be prepared to accept by way of a compensation for gathering costs the same per MCF gathering costs charge allocated to other companies gathering gas in the field.

( Go to Page 7054 )



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(The list continues on the next page.)



H-1-1 10.30. a.m.

Argument by Mr. McDonald.

- 7054 -

The reference to this, Mr. Chairman, is at page 6284, Volume 78, of the record.

In order to test what would be the result or dealing with the matter in the way that is last suggested, namely, by carrying over to the Gas and Oil Refineries' area the same per M.C.F. gathering' charges as were paid, or are to be paid to the other fields, I made some calculations and I finally came to the conclusion, Sir, that the fixing of the gathering costs in this area should be made having in mind the evidence that is now before the Board.

In giving consideration to the value placed on the equipment by the Appraisal Company of Vancouver, I made comparisons of the over-all costs of installing relatively similar equipment as given by Mr. Hill. I find that the appraisements submitted by the Company, for instance dealing with three inch pipe, gives a value of the pipe at \$ 1.25 plus 24 cents installation, roughly, \$1.50. Mr. Hill's appraisal with the same pipe in place is 97.6 cents. Similarly, four and a half inch pipe, the appraisal value of the company is \$1.89 plus 24 cents installation, which raised it to \$2.14 as compared to an installed cost on Mr. Hill's valuation of \$1.28. The same variation in installed costs as submitted by Mr. Hill, applies throughout the, practically the whole of the installations by the Appraisal Company. We have no evidence at all, Mr. Chairman, before us as to the basis on which the appraisal was made. We do not know whether the appraisal costs were based on the highest prices obtainable for the goods, for the equipment, and we have no idea of the basis for the labour, and I submit that there is not sufficient evidence before the Board to accept and adopt the appraised valuation submitted by the Gas & Oil Refineries Limited.







Argument by Mr. McDonald.

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Now, as alternative to that, we have Mr. Hamilton's historical cost. I might say, Sir, that in regard to the Madison and the British American companies, the appraisal values which I have adopted were supported with all the data which I think was necessary for the Board to have before it, and it is because of the lack of that data and the lack of explanation and evidence which I think the Board should have, that in this particular case I am departing from my previous suggestion which I am asking the Board to adopt in regard to the other two companies, namely, reproduction new valuation, and I am going to suggest that the Board in this particular case adopt as its method of valuation historical costs as worked out by Mr. Hamilton. And in that regard I have prepared an exhibit, Mr. Chairman.

THE CHAIRMAN: Exhibit 189.

DOCUMENT IN QUESTION MARKED  
EXHIBIT 189.

THE CHAIRMAN: Your suggestion, of course, involves discrimination, Mr. McDonald, doesn't it?

MR. McDONALD: No.

THE CHAIRMAN: If I adopt your suggestion as to Madison and B.A. reproduction new less accrued depreciation on the throughput basis, that is my recollection of the exhibit.

MR. McDONALD: Yes.

THE CHAIRMAN: But in the case of Gas & Oil Refineries I take historical costs, I do not know what they are, what the difference might be, but wouldn't there be discrimination? Mr. Chambers said I cannot do it.

MR. McDONALD: No, the Board must deal with the rate base on its own merits. For instance, it would not be







Argument by Mr. McDonald.

- 7056 -

discrimination, for instance, to fix - you must deal, as I explained a moment ago, with the evidence which is before you. You have not the evidence on which you can apply the same principles to all of the companies, you have not the relevant or comparable basis, and in that case then the Board is driven to the position that it must act on the evidence that is before it.

THE CHAIRMAN: I suppose that no matter which method I use, I could reduce them all to the same level by some process of arithmetic by taking the basic figures that I have?

MR. McDONALD: Yes.

THE CHAIRMAN: It would be only comparative results, but it would be on the same principle, and you could defend it by arithmetic.

MR. McDONALD: Yes. But I fear that an arbitrary valuation, as it were, or an arithmetical formula, does leave out of account individual merits that may be applicable to the individual units, and they must be dealt with on an individual basis.

THE CHAIRMAN: I suppose I could apply historical costs to all of them, and then there would be no discrimination.

MR. McDONALD: Yes. In that event your problem would be solved. But I feel confident if there had been adduced in evidence here a reproduction cost valuation of this system, somewhat along the lines set out by Mr. Hill, that there would be very little difference between historical costs as shown by Mr. Hamilton and the reproduction cost now depreciated on a throughput basis over the entire life of the reserve handled or to be handled through the installations.







Argument by Mr. McDonald.

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MR. HARVIE: Mr. McDonald, by referring to the Exhibit 189, I was wondering if there is not a typographical error in one of the first three figures, as that ten thousand dollar and the seventy-one thousand dollar item does not leave sixty-eight thousand dollars, and it is carried all the way down.

THE CHAIRMAN: It should be sixty-one.

MR. CHAMBERS: Yes, sixty-one.

MR. McDONALD: The error there, Sir, is - oh, yes, the first figure should be \$78,984.00.

MR. HARVIE: \$78,984.00?

MR. McDONALD: Yes. That arises this way, Sir, the reference is to W-H-67, which is the statement filed by Mr. Hamilton, in which he deals with the valuations, in which he deals with the information that he obtained in the examination of the records of the Gas & Oil Products Limited, and the Gas & Oil Refineries Limited, W-H-67, which was made part of Exhibit 124. He gives the net depreciated value of the equipment at \$71,804.62, and Mr. Hamilton had omitted in his compilation statement of adding an allowance of overhead of 10%. I, therefore, have added \$7,180.00, making my opening figure \$78,984.00. You will recollect, Sir, that Mr. Hamilton in arriving at this valuation did so after checking the books of the Company and obtaining therefrom as much data with regard to the original cost as he could obtain, and then by reference to other purchases made by the Company for their purposes, and discussion with the Company officials, he felt that he had included in his gross historical cost value of \$119,000.00 all of the equipment at a fair price. And then he applied a throughput depreciation formula which he works out in Statement W-H-65,





Argument by Mr. McDonald.

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and arrives at his value as of the first day of January, 1944, of \$78,984.00.

In Statement W-H-68, Mr. Hamilton calculated the depreciation on the equipment of the through-put basis for 1944 at \$9,409.00, and since he had increased his value by 10%, that amount is increased to \$10,349.00, leaving the net balance as of December 31st, 1944, of \$68,635.00. Using this as the balance as of January 1st, I have added depreciation at 50%. I took an arbitrary allowance for depreciation on the basis of seven years. Deducting 50% gives us a balance of \$63,735.00, as of July 1st, to which is added working capital on the figures submitted by Mr. Scrimgeour in Exhibit 171, giving a net investment upon which to calculate the return of \$64,069.00.

(Go to page 7059)



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T-1-1 10.45 A.M.

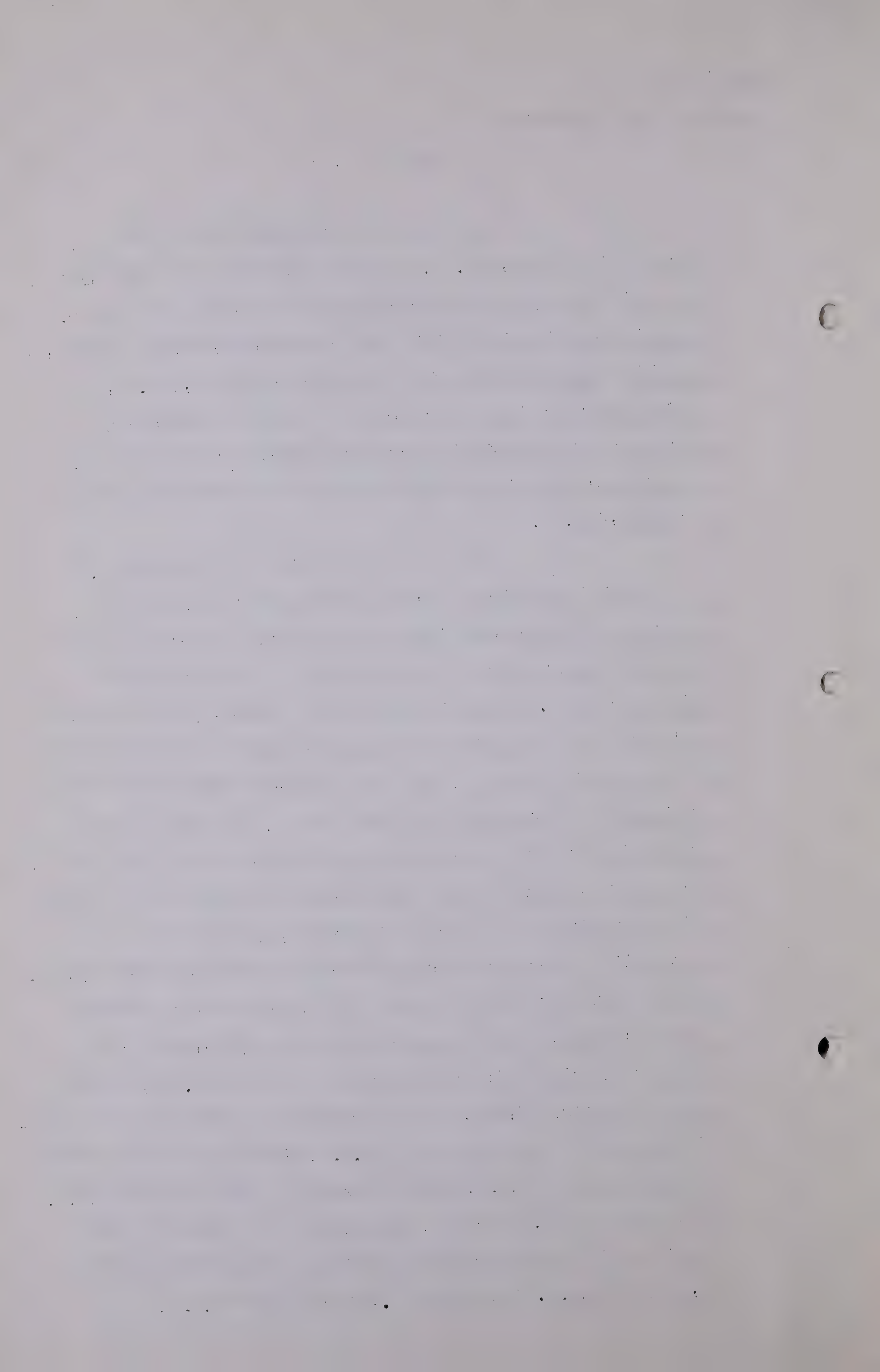
Argument by Mr. McDonald.

- 7059 -

The return is calculated at 7% net, amounting to \$7,474.00. In order to establish the earnings required, I took the direct expense as calculated by Mr. Scrimgeour in his Exhibit 171, and also accepted his calculations of administration and overhead at \$2,137.00, at full depreciation and returns and it shows the earnings required to operate the gathering system for the year 1945 on the same basis as the calculation of the other companies at \$21,460.00.

Then it is a matter of allocation. The gas in this particular gathering system is used not only for market purposes but also for the Gas and Oil absorption plant and also for fuel for the Gas & Oil Refineries by installations. In addition there is a flare. Only a proportion of the gas available for market actually is transmitted to the Madison system. There is a flare of something in the neighborhood of one million feet a day. I thought it was sufficient for the purposes of the figures that I have directed to you that I make a rough calculation and charging to market the proportion of the gathering costs, equipment and a proportion of the gas actually transmitted through the transmission lines to the scrubbing plant or the Madison system and I calculated that measurement at the junction of the British American line and this works out at 41.72%, leaving the net costs, \$8,965.00 to be recovered by Gas & Oil Refineries Limited. I have made the m.c.f. calculation on the basis of 880 thousand m.c.f. scrubbed sales in 1945 and the m.c.f. cost would be 1.018 cents. Calculating the costs on the basis of the gas actually transmitted in the line, namely 1,480,198 m.c.f. the cost is .632 cents per m.c.f.





Argument by Mr. McDonald.

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MR. MAHAFFY: May I ask a question there. I would like to make sure I am right on this whilst Mr. McDonald is on this point. You have not included in the figure of 1,480,198 the gas sold to Gas & Oil Refineries for fuel purposes?

MR. McDONALD: No.

MR. MAHAFFY: Nor the gas sold to the so-called domestic system operated by Gas & Oil?

MR. McDONALD: No.

MR. MAHAFFY: That would change your percentage considerably.

MR. McDONALD: No, it would just change the proportion. The m.c.f. cost, I think, would remain the same. It would change the proportion,

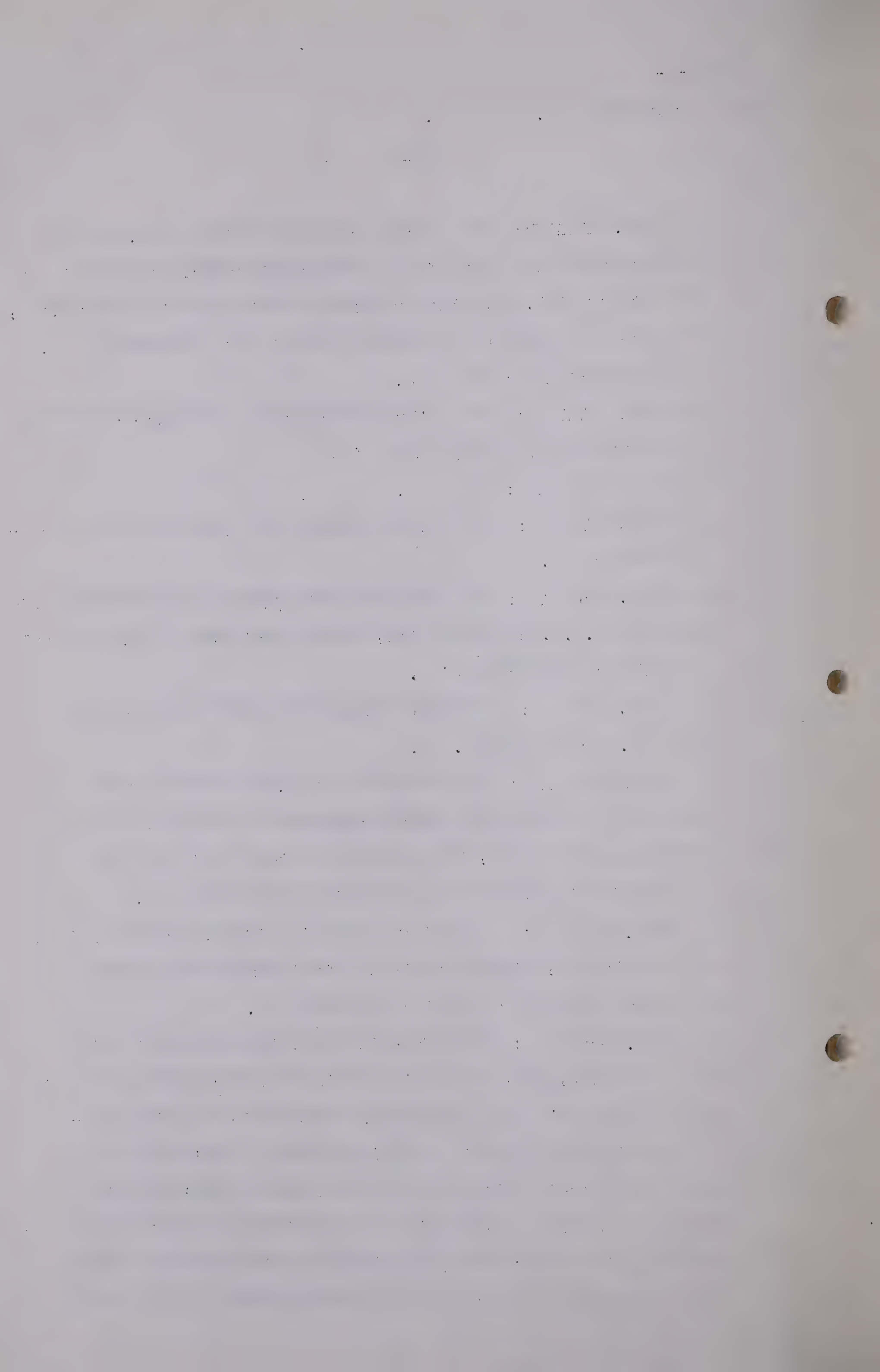
MR. MAHAFFY: It would change the percentage of your 58.22 and your 41.788.

MR. McDONALD: Yes, it would. If the volume of gas delivered to those local markets amounted to 20% of the gathering costs, then the amount to be paid by Gas & Oil Refineries will be in the neighbourhood of 60%.

MR. MAHAFFY: I am wondering if Mr. McDonald, it is up to him, might explain why it is the additional markets or outlets were not included in that.

MR. McDONALD: That is one thing I was going to touch on later, sir, but I might point out for the purpose of what we will call the Gas Company market or the over-all Madison market we agreed in the Producers' Committee in consultation with the Gas & Oil Refineries' officials that the local market and the Gas & Oil Refineries' system comprising the refinery and the domestic services given there should be segregated from the over-all market of the field.





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190	- Allocation of Madison's Gathering and Compressing Costs, 1945, as submitted by Mr. McDonald	7068.
191	- Allocation of B.A.'s Gathering, Compressing & Repressuring Costs, 1945, as submitted by Mr. McDonald	7068.
192	- Summary as to Rate Bases filed by Mr. McDonald	7092.
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1. Introduction

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3. Results

4. Discussion

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6. References

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11. Contact Information

12. Declaration of Interest

13. Funding

Argument by Mr. McDonald.

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That is covered by Exhibit, I think it is 88.

THE CHAIRMAN: You are making your calculation on the basis of the market-sharing position.

MR. McDONALD: Only, yes, Mr. Chairman. That is Exhibit 88. Yes, so that for the purposes of the over-all price which the Board is to fix that market is in its own position.

MR. STEER: May I ask this, the effect of Exhibit 189 is that you are asking or you are suggesting that the valuation placed on these gathering lines be paid for by the consumer and the absorption plant in the proportion set out?

MR. McDONALD: Yes, this is just an arbitrary valuation on the volumetric basis, or an arbitrary allocation of the costs on the volumetric basis.

MR. HARVIE: You do not attempt, Mr. McDonald, to make the same type of allocation as you suggested with the B.A.?

MR. McDONALD: No, I have not refined it to that extent.

MR. CHAMBERS: These other markets, Mr. Mahaffy referred to are those served by this same system?

MR. McDONALD: Yes, they are served by the system.

MR. MAHAFFY: And the producer is paid for that gas too, is he not?

MR. McDONALD: The producer will be paid for all the gas that is sold but it does not enter into the over-all picture which I am trying to deal with. That is a refinement which I think can be worked out, once the field price for gas is set. I do not think the amount of gas consumed has any real effect on the over-all picture.

THE CHAIRMAN: What you are saying is this: That the price which is finally fixed at the Gas Company gate should be determined by reference to the gas that goes to the Gas





Argument by Mr. McDonald.

- 7062 -

company gate in the respective share which the various companies are entitled to contribute to the market.

MR. McDONALD: Yes.

THE CHAIRMAN: And that any other consideration of refinery fuel, domestic fuel and field fuel does not come from the Madison scrubber and it should be dealt with separately.

MR. McDONALD: Yes. That was Exhibit 88. I do not happen to have it here. It sets out in detail the difference that arises because of that allocation as between producers in the Gas & Oil Refineries' area and producers in the rest of the field. It is but very small and on the over-all sharing position it is much less cumbersome to deal with the gas as transmitted through the transmission lines for market purposes only and leave this market in itself to the Gas & Oil Refineries and the Producers themselves.

Now, sir, I come to the question of stored and conserved gas and briefly, I would submit that the producers' position . . . . .

MR. HARVIE: Is this in respect to both ends of the field?

MR. McDONALD: Yes. I will deal with the general principles applicable to the storage and conserved gas and then will deal with the two ends of the field separately.

The Producers are prepared to accept and endorse the proposal of the Royalite Company as contained in the submission by that Company, having in mind the change in the factor to be applied to the current price of gas, arriving at the value of gas for storage and conserved purposes that Mr. Chambers mentioned in his argument. He



1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the transparency and accountability of the organization. This section also outlines the specific procedures for recording and verifying financial data.

2. The second part of the document addresses the role of the audit committee in overseeing the financial reporting process. It details the committee's responsibilities, including reviewing the financial statements, assessing the effectiveness of internal controls, and ensuring compliance with applicable laws and regulations. The document also describes the process for selecting and appointing audit committee members.

3. The third part of the document focuses on the internal control system, which is designed to prevent and detect errors and fraud. It outlines the key components of the internal control system, such as the control environment, risk assessment, and control activities. The document also provides guidance on how to monitor and improve the internal control system over time.

4. The fourth part of the document discusses the importance of communication and transparency in financial reporting. It emphasizes the need for clear and concise disclosure of financial information to investors and other stakeholders. This section also outlines the requirements for disclosing material information and the role of management in ensuring the accuracy and integrity of the financial statements.

5. The fifth part of the document provides a summary of the key findings and recommendations of the audit. It highlights the areas where the organization's financial reporting practices are strong and identifies the areas where improvements are needed. The document also provides specific recommendations for addressing the identified weaknesses and enhancing the overall quality of the financial reporting process.

Argument by Mr. McDonald.

- 7063 -

changed his time element from 15 years, I believe, to 13 years increasing it from 3.1% to 3.6%. Pardon me, . . . .

MR. STEER: No, .31.

MR. McDONALD: .31 to .36.

MR. CHAMBERS: It is not a per cent.

MR. McDONALD: No, it is a factor.

Now in regard to the South End, in Exhibit 89 the producers have placed on record the proposal which makes applicable to the storage and conservation of gas in the South End a similar method as that of the Royalite proposal, with the exception that in that case there is no purchaser of the gas. That gas is to be held in storage for the common account of the parties that contribute thereto and there is no question of money being paid currently at a discounted amount. Otherwise the schemes will work out as far as the consumer is concerned and as far as the operation, very much along the same lines. The figures, sir, as to the amount of gas to be repressured or stored and the amount to be conserved are revealed in Mr. Chambers' Argument in Volume 84, page 6790.

MR. HARVIE: Just one point on that. When you compare the way the two suggestions, as to the way that is worked out, at the North and South End, it is suggested that the price of gas to be ultimately produced from the South End would be worked out to this price the same as the Royalite.

MR. McDONALD: Yes, an identical suggestion.

I may point out that the amount of gas to be stored is calculated in Exhibit 47 for 1945, including 1945, is 41,154,000,000 and the amount to be conserved is 23,058,000,000.





Argument by Mr. McDonald.

- 7064 -

Now throughout this Hearing we had a great deal of discussion as to the allocation of the cost of repressuring and for what purposes the repressuring and storage were being done and against what parties should the next cost be allocated. Mr. Zinder dealt with this problem on behalf of the Producers and he filed Exhibit 140 and at page 5217, in Volume 65, he states as follows:-

"It is elementary that the source of supply for gas marketing purposes must have two essential characteristics, namely, the ability to supply peak demand, and adequate reserves of gas sufficient to maintain the supply for the period necessary to amortize on a reasonable basis the equipment installed both for the purpose of supplying the gas to consumers and the equipment purchased by the consumers to utilize the gas.

This problem of maintaining an adequate reserve is one that has always been the concern of gas distributing companies, the consumers, and utility boards and commissions. In this Province the necessity of maintaining a reserve has been recognized in the past through allowances made in the rate base and operating expenses of the Gas Company set up under the terms of the Judgment of the Public Utility Commissioners, July 10th, 1931."

"In its reasons for Judgment in respect of the Gas Company rate base above mentioned, the Alberta Board of Utility Commissioners stated and this is a quotation from the Judgment;

"Bow Island Field.

The operation of repressuring the Bow





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Argument by Mr. McDonald.

- 7065 -

"Island Field represents a new investment which materially prolongs the period of usefulness of that field and the 16" pipe line laid from it, and both parties agreed as to the usefulness of the investment."

(Go to page 7066)





Argument by Mr. McDonald.

- 7066 -

I might state that the "both parties" referred to there are the City of Calgary and the Gas Company.

Then we find that Mr. Zinder refers to the practice in the United States and refers to a paper read by the General Counsel for the Federal Power Commission, who reviewed the practice in the United States:

"Faced with a determination of the just and reasonable rates to be charged by the pipeline company for the gas which it produces, the Federal Power Commission has taken it for granted up to now that it should see to it that the company secures full reimbursement for all the costs, including a fair profit, it incurs in the process of acquiring and developing an adequate gas supply."

I refer to that, sir, as supporting the proposal that costs of maintaining the storage both in Bow Island and in Turner Valley is a proper charge to the Gas Company and to be included by the Gas Company in its charges to the ultimate consumer.

Then Mr. Zinder further goes on: at  
Page 5221:

"it is my opinion that the evidence does not conclusively show any appreciable benefits of repressuring other than providing for increased gas reserves for the consumer. Thus, there does not seem to be any basis upon which the situation in Turner Valley differs substantially from comparable situations wherein the costs of providing adequate reserves have been clearly recognized as a consumer benefit and the costs permitted to be charged to the consumer."

Then at Page 5212, of Volume 65, Mr. Zinder dealt specifically with the matter of costs, that is



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Argument by Mr. McDonald.

- 7067 -

how to ascertain how the actual costs of repressuring and storage, or storage, should be arrived at.

In referring to this evidence, sir, as I have pointed out in dealing with the allocation in the British American area, the producers maintain that the storage costs are general costs to be included in the overall operating expense of the utility and that in fact there is no necessity for making a refined calculation of them.

However, if that is done the method under which those costs should be ascertained, I submit, is that suggested by Mr. Zinder.

He states:

"The costs involved in repressuring, in view of the plans proposed, are a portion of the gathering system costs and some direct costs incurred for repressuring only. The amount of capital investment and operating expenses made specifically for repressuring are comparatively small. At the time of the peak demand on the gas system all equipment is being utilized to full capacity. However, due to the wide variation in temperature in this area and the large amount of gas used for heating, the use of gas during the non-heating season is substantially less than during the peak. During this off-season period there is considerable available capacity that can be used to repressure. Thus, a portion of the present system costs are properly allocable to repressuring.

There have been some calculations made and contained in Exhibits before the Board as to the cost of repressuring. At my previous appearance before this Board I recommended that the proper basis of allocating





Argument by Mr. McDonald.

- 7068 -

the costs of gathering and compressing was what I termed the Demand and Volumetric, or the Demand and Commodity basis of allocation."

And then Mr. Zinder has set out, attached to his Exhibit 140, a reconciliation of the method he would apply to repressuring based on the figures which were then on the record.

I have carried out that allocation, relating it to the costs established by me in my rate base which I have submitted, using the 7% return and using the prior allocations as between the absorption plant and the consumer, which I have already referred to and I have made an Exhibit, sir, for the Madison system and a similar allocation for the British American, which I would now produce and file.

STATEMENT RE MADISON COMPANY  
PRODUCED AND MARKED AS EXHIBIT  
190.

STATEMENT RE BRITISH AMERICAN  
COMPANY PRODUCED AND FILED AS  
EXHIBIT 191.

Now dealing first with the Exhibit 190, the allocation of gathering and compressing costs for 1945, for the Madison Natural Gas Company, I have taken the total costs of the compressor plant No. 1 and the compressor plant No. 2, or rather No. 3 and the gathering line.

I have then deducted from those costs the proportion which has been allotted to the south residue line, that is the line through which the dry gas of the G.O.R. system has been transmitted. This leaves for direct depreciation and direct return, a total charge in 1945 of \$218,717.00. That is on the demand side.

I have allocated this, 17.42% to the



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Argument by Mr. McDonald.

- 7069 -

absorption plant, of the volume consumer the equivalent being the percentage of the gas actually gathered<sup>which</sup>/has been consumed in the absorption plant.

The balance of 82.53% I have allocated to the market as being the capital charges having to do with the installation of the system and being the peak load, being relevant to the peak load requirements.

Now with regard to operating expenses, I have taken the total direct expenses and total administration expenses of the three units, again made a deduction with regard to the apportionment of the south residue line and then made an allocation on a straight volumetric basis, that is 17.42% in respect to the volume consumed in the absorption plant, 6.37% being the amount of the gas gathered which finally has been stored and 76.21% being the balance of the gas gathered which was used up for market purposes; which finally reached the market or was less scrubbing deductions.

Now I have set out towards the bottom of the page a calculation of volume. I obtain my volume from the figures set out in the gas analysis contained in Exhibit 158 at page 4.

Now this is a straight application of the system advocated by Mr. Zinder in Exhibit 140.

It differs from the repressuring costs set out in Exhibit 181, filed by Mr. Chambers.

You will note that on Page or in Schedule 6 of Exhibit 181, the distribution of compressor plant costs between wet and dry gas is made on a horse power basis and those are the costs which are carried forward into the operating





Argument by Mr. McDonald.

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statement of the Madison Company as being allocated to repressuring.

In addition to the direct charges arising out of the investment in the line from the compressor station to the input wells and the investment in the equipment required to change the compressors from low pressure compressors at three hundred and somewhat pounds to storage compressors at something in the neighbourhood of eight hundred pounds.

( Go to Page 7071 )



1. Introduction

The purpose of this study is to investigate the effects of various factors on the growth of a specific plant species.

2. Methodology

The study was conducted in a controlled environment, using a randomized controlled trial design.

The experimental setup involved the use of a growth chamber, where the temperature and light conditions were carefully monitored and controlled.

The data collected during the experiment was analyzed using statistical methods, including t-tests and ANOVA.

The results of the study indicate that the growth of the plant species is significantly affected by the temperature and light conditions.

Specifically, the growth rate was found to be higher at higher temperatures and under longer light periods.

These findings have important implications for the cultivation of this plant species in commercial settings.

Conclusion

Argument by Mr. McDonald.

- 7071 -

On the basis of this allocation taking the rate of return at 7% net and the other qualifications I have made in my operating statements filed, the total cost of repressuring for 1945 properly allocated to storage would be \$23,862.00 for this area.

Relating this cost to the actual amount of gas repressured, the amount per MCF is 1.994 cents. Relating the costs to the total amount of gas scrubbed, gas actually sold in the Madison system which is something in the neighbourhood of twelve billion five hundred and forty-six million cubic feet, the cost is .109 cents, which is a very small overall charge to be borne by the consumers as a per MCF cost of storage of one billion one hundred and ninety-six million cubic feet.

Now the allocation of similar costs in the British American area. As set out in Exhibit 191, I have the cost of the high pressure gathering line, the low pressure gathering line, the low pressure compressor to arrive at an apportionment of the gathering costs as set out in my statement filed as Exhibit 188. The demand charges have been allocated to the absorption plant and the market as these are the only two requirements which affect the capacity and cost of the installations.

I have added to the market the total demand costs in regard to the high compressor station, that is the depreciation on return on the entire installation which amounts to \$37,494.00, again following the reasons submitted by Mr. Zinder, the size and original installation cost of this compressor is dictated by market requirements and not by repressuring.





Argument by Mr. McDonald.

- 7072 -

We come to the operating expenses of the gathering system. The absorption plant is charged 15% as in Exhibit 188, but the balance of \$33,204.00 has been divided between repressuring and market on the volumetric basis, namely on the basis of 34% to the repressuring requirements and 66% to the market. That is divided out on the overall calculation, 28.9% to the repressuring and 56.1% to the market.

Then we have the allocation of the operating charges against the high pressure compressor and I have allocated these on the basis of the volume going to the market and the volume repressured in the 34% and 66%. To those we have added the direct repressuring cost, that is the cost of the repressuring line from the compressor plant to the input wells.

This is set out as taken from the operating statements where it is carried as an individual item. On this allocation I use the same apportionment figures as used by the British American Company. That is the amount repressured in the neighbourhood of one billion seven hundred and fifty million, the amount to market three billion one hundred and twenty-nine million cubic feet. Relating the total expense to the amounts handled the charge per MCF of the gas actually repressured is 1.99 cents which is contrasted to the similar item in the Madison area of 1.94 cents. The charge however in respect to the total actual sales of scrubbed gas in the British American area per MCF cost is 1.089 cents.

MR. HARVIE: Mr. McDonald, do I gather your total of \$34,098.00 under repressuring is paid by whom?

MR. McDONALD: It is an overall charge to the market. That is what I am now going to deal with. That is Mr. Zinder's suggestion and his evidence before the Board.





Argument by Mr. McDonald.

- 7073 -

MR. HARVIE: What is being accomplished by splitting it down to repressured markets. I assume it is all one market.

MR. McDONALD: What is accomplished is to know what the actual repressuring costs are and we know what is in dispute between those parties who have consistently stated throughout the Hearing that it is one that should be allocated against the producer on the one side or the consumer on the other.

With the amount we have on this process of allocation I have reached the figure that is in dispute.

MR. CHAMBERS: Mr. McDonald in Exhibit 190, the last figure on that page per MCF scrubbed sales 1.90 cents, that is scrubbed gas sales from that system ?

MR. McDONALD: Yes, that is the \$23,862.00 over twelve billion five hundred and forty-six million cubic feet which was the scrubbed sales from the Madison system and does not include scrubbed sales from the G. O. R. system.

MR. CHAMBERS: And likewise the .191 - .190 cents scrubbed gas sales from the British American system ?

MR. McDONALD: That is true, yes.

Now, sir, in the early part of the Hearing there was considerable emphasis laid on the matter of benefits of repressuring and storage gas in Turner Valley. The matter was dealt with by Dr. Katz, R. E. Davis, S. J. Davies, Mr. Connell, Mr. Stevens-Guille and Mr. McCutchin.

Now I do not intend at this stage at least to deal with that evidence in detail. I submit however that in the final analysis the evidence is to this effect that there is no measurable benefit to the crude producer arising from the storage of gas in either the north end or the south end of the field.

Dr. Katz was examined at great length and





Argument by Mr. McDonald.

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the references to his evidence are at Pages 627, (Volume 9), Pages 706, 709 and 751 (Volume 10).

THE CHAIRMAN: Did not Mr. McCutchin think there would be benefits ?

MR. McDONALD: Yes. I will go this far with Mr. McCutchin. His evidence, particularly in the early stages seemed to indicate that although he could suggest no basis or means whereby the benefit could be measured that if the pressure was maintained in the gas cap that the maintenance of the pressure in the gas cap would react to prevent or to slow up the migration of gas from the crude oil area to the gas cap, which, at that time, and now is, a lower pressure than the crude oil area and to the extent that this retarding of migration was effective, then some possible benefit would accrue to the crude oil producer in that he would be able to operate at a higher pressure for a long period. But, Mr. McCutchin met difficulty which Dr. Katz dealt with, namely there is no method or tangible result that can be foreseen.

THE CHAIRMAN: And perhaps you can tell me - Mr. Reeve appeared on behalf of the producers and urged the construction of the low pressure system. Did he at that time have the same belief that there would be a benefit to the crude oil producers ?

MR. McDONALD: Yes. I think Mr. Reeve's position was that, as I explained for Mr. McCutchin, that it is an advantage if there is any advantage to the south end in having the repressuring done there, the south end should have it.

In other words, if this theory that the maintenance of pressure in the gas cap will benefit the crude oil producers, Mr. Reeve wanted to get that benefit. There is



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1. The first part of the report is devoted to a general survey of the situation in the country.

2. The second part contains a detailed description of the various districts and their resources.

3. The third part deals with the question of the distribution of the population and the means of subsistence.

4. The fourth part is devoted to the question of the development of the country and the measures to be taken for that purpose.

5. The fifth part contains a summary of the results of the survey and the conclusions to be drawn therefrom.

6. The sixth part is devoted to the question of the organization of the administration and the measures to be taken for that purpose.

7. The seventh part contains a summary of the results of the survey and the conclusions to be drawn therefrom.

Argument by Mr. McDonald.

- 7075 -

nothing to indicate<sup>and</sup>/he had no positive basis on which he could say, I am going to get a benefit, but the tenor of his evidence and the tenor of the representations made to the Board was that if there is going to be any benefit we want to get it, if it does not cost any more money to repressure gas in the south end than it does in the north end, then we want it done in the south end. And, that was on the basis then of the figures before it. It does not cost any more to repressure in the south end than in the north end and on the expectation or the anticipation that they should get the benefit if any should arise. Representations were made to the Board along the lines mentioned by Mr. Reeve.

( Go to Page 7076 )



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Argument by Mr. McDonald.

- 7076 -

MR. CHAMBERS: Pardon me, did Mr. Reeve appear as a producer?

MR. McDONALD: Appeared as a producer, as an individual.

MR. HARVIE: The statements filed, 189 to 191, show that there is no additional cost of repressuring the South End.

MR. McDONALD: Yes. The entire purpose of filing the exhibits, that shows that there is no difference in cost. The calculations made at the time of the estimates and which are filed, indicated that the costs in the South End would be less than in the North End. And you will recollect, too, Mr. Chairman, I might say on the over-all picture, I have not the reference handy, but Mr. Stevens Guille's evidence is very definite on this point that the repressuring installations in the North End, as now set out and calculated in my Exhibit 190, are sufficient only to take care of the gas that is available for repressuring in the North End. Now, if this gas from the South End was to be transported to the North End to be repressured in 1945, it would have required an installation of the equivalent horsepower at new cost that is actually used and installed for this purpose in the South End now, the difference being that the installation in the South End now is available for two purposes, for repressuring and transmission. And the installation of the additional equipment in the North End has been postponed for a considerable period until it is necessary in the over-all operations of the North End to instal a new machine to reduce the suction pressure by say another 50 pounds.

THE CHAIRMAN: Yes, but you have the additional





Argument by Mr. McDonald.

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costs of the low pressure system in the South End.

MR. McDONALD: Yes.

THE CHAIRMAN: Which enters into the picture.

MR. McDONALD: Yes, it does. And in my calculations here I have allocated those additional costs into repressuring. I have segregated them much along the lines of Mr. Donellan's statement filed by the British American Company, Exhibit 184. My submission is, Sir, that if the attitude is taken by the City and the Gas Company, and I anticipate it will be, that the net effect of those, what we call repressuring costs, is for the benefit of the producer, either crude producers or the producers generally.

I want to refer to the evidence as I see it. Dr. Katz, I think, is the one witness who has appeared before this Board, I would not say he is the one witness, but he is one of the witnesses who has a very general extensive practice that has not been subject to contact with local elements which might in some manner or other give him an impression of some factors more than others.

THE CHAIRMAN: What you are trying to say is that he would not be prejudiced?

MR. McDONALD: No, I did not mean it that way, Sir, I meant he has not had contact with everybody from day to day so that his judgment is in any way affected.

MR. STEER: He is not an advocate expert, and the other experts are.

MR. McDONALD: I believe there is something in that too.

At Page 751, Volume 7, Dr. Katz stated that there might be some over-all benefit, very difficult to measure, in the production. And I emphasize there that he





Argument by Mr. McDonald.

- 7078 -

says there may be some over-all benefit. He does not say there is a specific benefit. He also says there will be some loss, some wells will be forced into the gas class, and I submit that he feels that with regard to all of the re-pressured gas.

Now, with regard to that item, Sir, that there will be some loss and some wells will be forced into the gas class, I submit that is an operating situation which has received a great deal of consideration, and that is a situation which has received a great deal of consideration by my clients and many of them definitely complain of that state of affairs.

Now, Dr. Katz is emphatic that all of the repressured gas will be available at a later date for production and delivery to the market, either from the input well itself or some other wells in the related area.

Now, when Dr. Katz returned to the stand in January, he was asked at page 5717, Volume 69, who, in his opinion, should pay the gathering and compressing charges of compressed gas on the basis of the Royalite's submission.

Now, I summarized his evidence as follows:-

He states that the current operating expenses resulting from gas returned to the reservoir as stored gas, should be included in the operating expenses of the utility furnishing the gas to market. And the prime reason is that the equipment which is used to supply the market for peak loads is used in off periods to put the gas back into the ground.

Secondly, he points out that it is



1. The first part of the paper is devoted to a discussion of the

main

results of the investigation. It is shown that the system of equations (1) has a unique solution in the class of functions which are continuous in the domain  $D$  and have continuous derivatives up to the order  $n$  in the interior of  $D$ .

2. The second part of the paper is devoted to a discussion of the

problem of the stability of the solution of the system of equations (1) with respect to the initial conditions. It is shown that the solution of the system (1) is stable with respect to the initial conditions if the matrix  $A$  of the coefficients of the system is a Hurwitz matrix.

3. The third part of the paper is devoted to a discussion of the problem of the stability of the solution of the system of equations (1) with respect to the parameters. It is shown that the solution of the system (1) is stable with respect to the parameters if the matrix  $A$  of the coefficients of the system is a Hurwitz matrix.

4. The fourth part of the paper is devoted to a discussion of the problem of the stability of the solution of the system of equations (1) with respect to the initial conditions and the parameters. It is shown that the solution of the system (1) is stable with respect to the initial conditions and the parameters if the matrix  $A$  of the coefficients of the system is a Hurwitz matrix.

5. The fifth part of the paper is devoted to a discussion of the problem of the stability of the solution of the system of equations (1) with respect to the initial conditions and the parameters. It is shown that the solution of the system (1) is stable with respect to the initial conditions and the parameters if the matrix  $A$  of the coefficients of the system is a Hurwitz matrix.

6. The sixth part of the paper is devoted to a discussion of the problem of the stability of the solution of the system of equations (1) with respect to the initial conditions and the parameters. It is shown that the solution of the system (1) is stable with respect to the initial conditions and the parameters if the matrix  $A$  of the coefficients of the system is a Hurwitz matrix.

Argument by Mr. McDonald.

- 7079 -

practically impossible to compute the cost. And, he says, then, to write it off over a period of years, both because of the difficulty of computation and because of the prices that such computation might indicate for the gas stored if it should be stored for a long period of time.

I understand Dr. Katz to infer there the fact that if this cost of 1.999 cents in the British American calculation, as I have set it out, and the cost of 1.994 cents as set out in the Madison calculation, Exhibit 190, were paid by the producer, that is the cost of the gas which should be included in the sale price of the gas when it is reproduced, and the accumulation of interest on the invested moneys as between the date on which the storage was made and the date upon which the gas is reproduced, might very well place a cost price on the gas which would exceed or be excessive, having regard then to the market available for it.

Replying to a question of yourself, Mr. Chairman, at page 5719, Volume 69, Dr. Katz stated:

"The net result is that the consumer of gas, the ultimate market, will have to pay the current cost of gathering and storing the gas which goes back down into the ground."

He states that it is fundamental in his conclusion expressed that there be a fixed price which may be charged for the gas when it is reproduced. Dr. Katz emphasized that if the gas were sold at a higher price to some consumer, other than the consumers who actually take care of the storage costs in the first instance, then the resulting profit would be an earning in the utility operations and have the effect of reducing the over-all cost of the then current oper-



The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of all income and expenses. This will allow the business to track its financial performance over time and identify areas for improvement.

The second part of the paper discusses the importance of maintaining accurate records of all assets and liabilities. This will allow the business to track its net worth over time and identify areas for improvement. It is also important to maintain accurate records of all debts and obligations, as this will allow the business to track its financial obligations over time.

The third part of the paper discusses the importance of maintaining accurate records of all taxes and other legal obligations. This will allow the business to track its tax obligations over time and identify areas for improvement. It is also important to maintain accurate records of all other legal obligations, as this will allow the business to track its legal obligations over time.

The fourth part of the paper discusses the importance of maintaining accurate records of all other financial information. This will allow the business to track its overall financial performance over time and identify areas for improvement. It is also important to maintain accurate records of all other financial information, as this will allow the business to track its overall financial performance over time.

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Argument by Mr. McDonald.

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ations.

MR. FENERTY: That would be a consolation.

MR. McDONALD: Yes.

Now, you yourself, Mr. Chairman, asked Dr. Katz at page 5722, Volume 69, to assume that the price of gas was 2 cents and the cost of storage 2 cents, would it be fair to say that those charges be paid by the producer, that is the charges, referring to the storage charges, be paid by the producer who would then receive no net revenue. Dr. Katz pointed out in reply that one cannot say on one hand that the gas is valuable to the extent it should be conserved, and on the other hand say that it really does not have any value, because all of the value for conserving it is spent in so doing. During the course of his examination, Dr. Katz emphasized that he assumed that the gas was a waste produce prior to the time it was gathered, and this was no argument to the effect that the producer is not entitled to payment.

Dr. Katz pointed out that he does not believe a Governmental authority could say to the producer on the one hand, "You must give us the gas," and on the other hand say "It is so valuable that you cannot produce oil unless you dispose of it."

With regard to the point, Sir, on the effect of the Conservation Act and the regulations made by the Conservation Board, I think it was clearly demonstrated in the evidence that there is no restriction on the amount of gas, on the oil production of crude oil wells, other than the allowable fixed by the Conservation Board. No crude oil well is prevented from producing crude oil because it is also producing gas.

Now, I feel that Dr. Katz sums up





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Argument by Mr. McDonald.

- 7081 -

the entire situation with regard to the allocation of re-pressuring costs. And Mr. Ralph E. Davis dealt with the matter, and there are several points which I think he brought out which I think should be noted. He admitted at Page 5497, Volume 68, that the costs of storage for a gas company is a proper capital item to be included in the rate base in the annual charges of the gas utility company. At Page 5543, Volume 68, Mr. Davis admitted that storage of gas in Turner Valley was a long-term storage proposition, similar to the storage of gas which he referred by, I believe, it was some fifty other companies in the United States.

(Go to page 7082. ).





Argument by Mr. McDonald.

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In other words, sir, he differentiated in this field what we call "repressured". What we call "repressuring" is in fact storage as known in the United States. Repressuring in the United States, particularly in Texas is related entirely to the production of crude oil. Mr. Davis, before he concluded his examination I think was unqualified in his opinion that this was definitely a storage matter and not repressuring in the sense of being related to the production of crude oil.

With regard to the absorption plant, you will recollect, sir, that in the earlier stages of the consideration of this matter, there was some suggestion that the absorption plant would recover something because of the increased throughput arising out of the second processing of the gas which had been stored.

THE CHAIRMAN: And the volume of gas which they would obtain as a result of the installation of that equipment, which they otherwise would not have had.

MR. McDONALD: Possibly, sir, I should deal with that in two phases. First the question in the North End and secondly the question in the South End. In the North End, generally speaking, sir, there is no evidence on record that I can find which would indicate that this gas when reintroduced into the formation would effectively pick up an amount of additional hydro-carbons which would pay sufficient when recovered and sold, not only to pay the cost of the actual reprocessing but to provide a profit. It is obvious, of course, unless the additional hydro-carbons picked up by this gas were sufficient to provide a profit, when the gas was reprocessed, there is no net gain to the





Argument by Mr. McDonald.

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Absorption plant. That point is very much in doubt. The record, I think, indicates that on that we must take the view that there is no tangible or measurable benefit to either absorption plant.

THE CHAIRMAN: It seemed to me though, Mr. McDonald, on the evidence I heard, if I recollect it properly, that the profit motive seems to be more or less absent in the case of an absorption plant. They want the product but they do not care whether they make money or not. That is the way it looks to me.

MR. FENERTY: Before Mr. McDonald leaves that, just so that I will have it clear in my mind, I am uncertain at the moment whether you are supporting that proposition that in this field that is in effect storage or whether you are criticising it.

MR. McDONALD: In this field I hold the view that it is storage.

MR. FENERTY: Storage, yes.

MR. McDONALD: With regard to the North end of the Madison Plant, I am sorry, sir, the Royalite Plant and the Royalite Company, it must not be overlooked that Royalite is making a substantial contribution to this whole phase of conserving gas in its proposal to produce its gas cap only to market requirements and therefore below the Brown allowable.

THE CHAIRMAN: Is not that making a virtue of necessity? Mr. McDonald?

MR. McDONALD: Well that is . . . .

MR. CHAMBERS: I submit not, sir.

THE CHAIRMAN: You are not losing any money by it, Mr. Chambers.





Argument by Mr. McDonald.

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MR. STEER: I would say it was a matter of intelligent self-interest.

MR. McDONALD: The position is this as I take it, sir, that Royalite could adopt exactly the same procedure that a number of other producers now do, namely produce their wells in accordance with the allowable allotted to them.

THE CHAIRMAN: And then put it back in the ground.

MR. McDONALD: As matters now stand there is no. . . .

THE CHAIRMAN: Mr. McDonald; perhaps we will not argue it but I just did not like your patting Royalite on the back because it is something that I think they ought to do anyway, that is all.

MR. McDONALD: Quite all right, sir.

THE CHAIRMAN: And I have no quarrel with Royalite either when I say that, none at all.

MR. McDONALD: I am not in the habit of patting Royalite on the back.

MR. STEER: We have been glad to see the change in your attitude the last two days.

MR. McDONALD: The situation as I look at Royalite is this, they have adopted a method of operation of their gas cap which certainly does fall in line with the general principles of conservation which are being applied in the field. That has been done voluntarily in a large measure and it should not be overlooked. That is the limit of my submission.

THE CHAIRMAN: You do not want me to add anything to the rate base, do you, for that?

MR. McDONALD: No, we are not asking for that, sir.  
Now with regard to the South End. In my



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my allocation of costs as set out in Exhibit 188 you will notice I have allocated to the Absorption Plant,  $57\frac{1}{2}\%$  of the capital investment and the capital charges in the gathering units. I think that is fair and the maximum contribution which the absorption plant should be asked to bear.

THE CHAIRMAN: What are those percentages, Mr. McDonald?

MR. McDONALD: I allocate on the demand side 15% plus  $42\frac{1}{2}\%$ .

THE CHAIRMAN: I thought you gave me the percentages relating to your totals?

MR. McDONALD: No, not the totals.

THE CHAIRMAN: Oh, I see.

MR. McDONALD: The totals would be roughly. . . . .

THE CHAIRMAN: 42 and 58.

MR. McDONALD: It would be roughly one-third,  $33\frac{1}{3}\%$  of the total gathering charges has been allocated to the absorption plant, leaving the other two-thirds to be borne by the market as a whole, which in turn is reflected in the net price received by the producer for the gas.

We now come to the matter of the Bow Island Storage. The Gas Company submitted Exhibit 173, in which the Company proposed that it would purchase gas for storage in Bow Island at a discounted price not exceed one cent and would pay towards the cost of gathering and scrubbing two cents per m.c.f. of the gas delivered to it for storage. Now what I can say briefly in regard to that, Mr. Chairman, is that the producers feel that the discounted price is acceptable but they see no reason why the limit of one cent should be placed on it. That in effect has the result of placing three cents as the maximum current value



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1. *Chlorophyll a* and *Chlorophyll b* contents were determined by spectrophotometry using the method of Lichtenthaler and Whistler (1973).

Argument by Mr. McDonald.

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of that gas at the well-head. I would suggest that the gas should be purchased by the Gas Company at <sup>the</sup> same discount rate that the other storage gas in the field is purchased by Royallite and that the gathering and scrubbing costs be absorbed in the over-all price charged to the Gas Company for all the gas delivered to it.

THE CHAIRMAN: Have I any jurisdiction to compel them to do so, Mr. McDonald?

MR. McDONALD: You have jurisdiction to fix the price at which the gas is to be sold.

THE CHAIRMAN: I cannot say to John Jones: "You have got to buy it."

MR. McDONALD: No, I am not suggesting for a moment. . .

THE CHAIRMAN: If I fix that price either the Gas Company would have to buy or a new customer would have to be found or it would have to be repressured some other place.

MR. McDONALD: Yes. I understood the proposal of the Gas Company was that they would - they set out this price on the basis that they were subject to any reasonable adjustment that the Board thought advisable and the only adjustment I am suggesting is that this limit of one cent is not reasonable.

MR. STEER: We have no objection whatever to discussing it but as it stands now the proposal stands as to what the Company is prepared to do.

MR. McDONALD: I will deal with that later, sir.

THE CHAIRMAN: All right, Mr. McDonald.

MR. McDONALD: I mean if it is a "take it or leave it" proposition.

THE CHAIRMAN: Then we will adjourn now until 2 P.M.

(The Hearing was adjourned until 2 P.M.)

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Argument by Mr. McDonald.

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2 P.M. SESSION

MR. McDONALD: Sir, one further point I think I should mention before going to a consideration of the price of the gas at the well head, and that is to refer to the matter of the Alberta Nitrogen Plant.

The statement made by Mr. Colls, Exhibit 176, was useful to show the net effect on costs of gathering as between the Nitrogen Plant being a customer and the Nitrogen Plant which is not a customer.

From the producers' standpoint, I was interested in hearing from the officials of the Nitrogen Plant as to what suggestion they had as to price. At page 6471, Volume 81, Mr. Colls, as I understood his evidence, was not suggesting that the price of 7 cents be retained or making any recommendation. He was leaving the matter of price to the Board.

Now I must concede, Sir, that there is a great advantage to the consumer on the one hand and to the producers at the other end of the price structure, if the Nitrogen Plant load can be maintained and is maintained for a considerable period, but I feel that the Nitrogen Plant should pay some price related to costs and which is related to the value of the gas. The only suggestion I have is that we have worked out in the rates of the Gas Company Rate Number 6, which is a rate acceptable to the second largest consumer of gas, namely, the Imperial Oil Refinery, and which is acceptable also to other large consumers, and I feel that, without more information, more suggestions from the officials of the Alberta Nitrogen Company, that the Board could assume that the Gas Company could sell the gas available for the Nitrogen Plant at the same rate as set out in Rate No. 6.

That is all that I can say at this time



Argument by Mr. McDonald.

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with regard to that particular market.

THE CHAIRMAN: Under this particular Act, have I anything to do with that?

MR. McDONALD: No sir, I do not see at this stage that you can fix the price at the Nitrogen Plant, but I think, having viewed the approach to the determination of the value of gas at the well head, that you can look at the use to which this gas is being put and the probable sale value thereof.

THE CHAIRMAN: I seems to me what I will have to do is to take their anticipated load into account in fixing the price to be paid at the Gas Company's gate.

MR. McDONALD: Yes.

THE CHAIRMAN: And then the matter of price schedules after that may depend upon one of two things, - agreement between the Gas Company and the Nitrogen Plant, or perhaps a hearing.

MR. McDONALD: Yes, that is the situation as I view it.

THE CHAIRMAN: And personally I hope that there will be an agreement.

MR. McDONALD: Well I have hopes too that there will be an agreement.

MR. STEER: That again, of course, Sir, will involve the whole rate structure.

THE CHAIRMAN: Quite right.

MR. McDONALD: Yes, I must emphasize the importance of that particular load on the whole picture., It is important, I think, from the viewpoint of everybody interested in the gas business that that load be retained.

THE CHAIRMAN: And it might be that it would be proper for me to work out two different prices, - one, assuming





Argument by Mr. McDonald.

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that the Nitrogen Plant is on the line and another assuming that they are not on the line, and they can determine whether or not they can afford to agree on that basic price at the gate.

MR. McDONALD: Yes, I feel that they have not been, that the Nitrogen Company, possibly through no fault of the officials here, or maybe in view of the circumstances under which the plant was operated, have not been of as much assistance to us as they could have been.

MR. CHAMBERS: May I interrupt?

MR. McDONALD: Yes.

MR. CHAMBERS: It seems to me from what I have seen published in the Press that since they last gave evidence the situation has changed, that they are no longer a public proposition. Private people have bought that plant now, and whether the Board can take judicial notice of that or not I do not know, or whether it could be spread on the record.

THE CHAIRMAN: I do not think we would have been hearing from them at all, Mr. Chambers, if I had not urged them pretty strenuously to come and give whatever evidence they could, because their load is going to have a tremendous effect on the basic price of gas.

MR. McDONALD: Now, Sir, I arrive at the point in my submission where I make a suggestion to the Board as to the final calculation of the well head price.

As mentioned previously, the first requirement in arriving at the price is to determine the proper charges for the services rendered between the wellhead and the output of the scrubber.

Now, I submit the evidence, the rate base and the operating statements that have been filed with





Argument by Mr. McDonald.

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regard to the three utilities in the field, are the proper bases for determining those charges.

Now, as from the outlet of the scrubber to the consumer, I must admit that we have no evidence before the Board with respect to the actual costs to the Gas Company in respect of those services. We are left to surmise on, which I must admit is very meagre information, the information that is obtainable from the balance sheets of the Gas Company filed.

Now, Sir, Mr. Chambers first dealt with the matter of obtaining the information from the balance sheets in detail and I adopt the statement which he filed and the arguments which he made in connection with it. The exhibit is Exhibit number, I am not sure of the number, Sir, I have not it, what was the number?

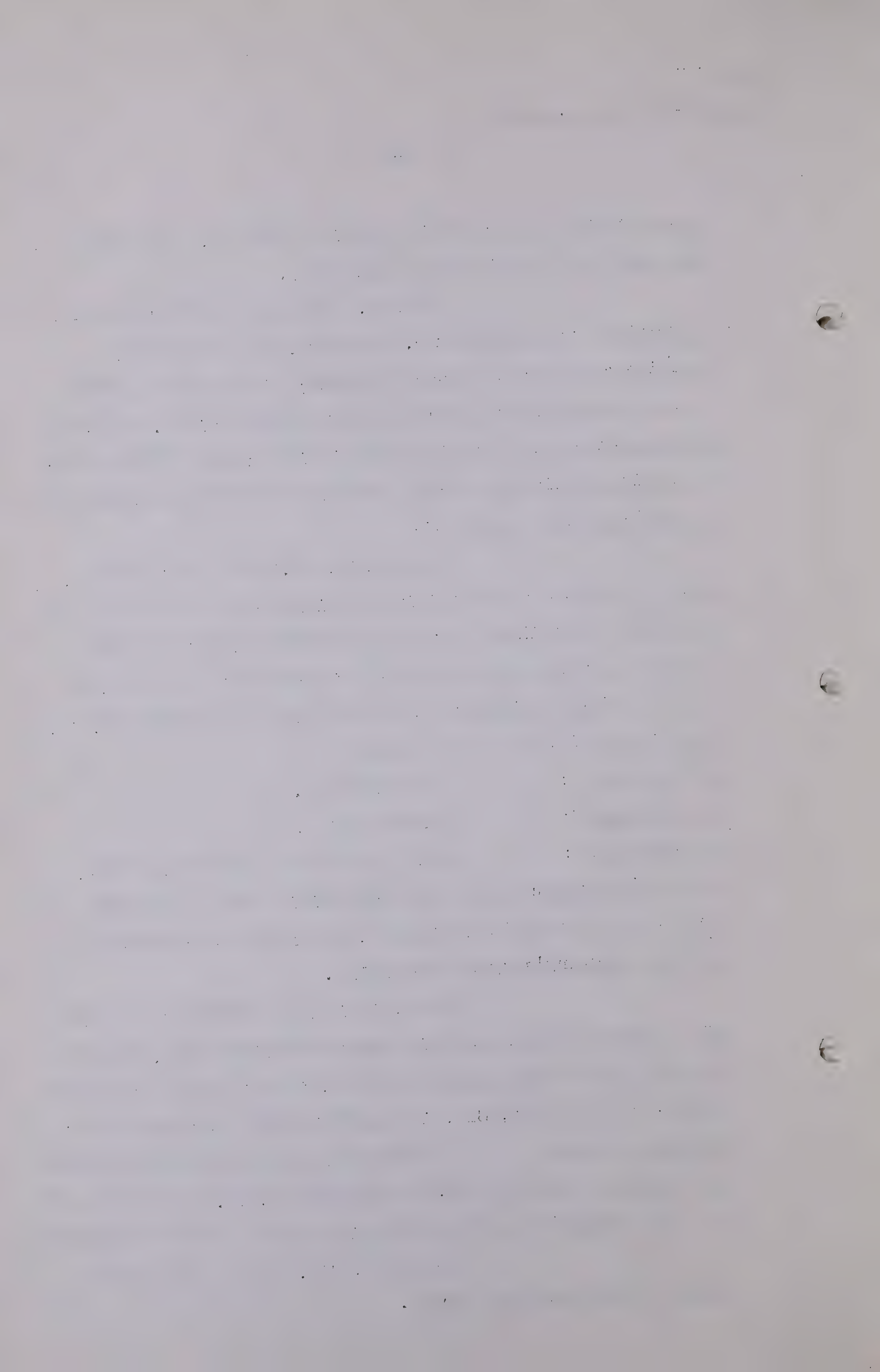
THE CHAIRMAN: 181 I think.

MR. CHAMBERS: Exhibit 180.

MR. McDONALD: And I have made reference to Mr. Zinder's evidence as to the competitive value of gas and coal, or other fuels at Calgary, and in the towns served by the Gas Company's system generally.

Now, it is my submission that the gas is worth at the scrubbing plant outlet the sum, not less than the sum set out in Exhibit 180, in which the calculation shows, - I am sorry, Sir, it is Exhibit 182, - in which the calculation shows the moneys available, on the assumptions made therein, which is 12.347 cents per M.C.F. on the basis of the 1945 operations as to quantities sold to ultimate consumers.

Now that, Sir, is the price at the outlet of the scrubbing plant.



Argument by Mr. McDonald.

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I submit that the evidence before the Board is conclusive that the domestic and commercial rate for gas to be sold by the Gas Company can be increased by as much as 5 cents per thousand cubic feet without any risk whatsoever of there being a decrease in consumption which will materially affect, over any appreciable length of time, the Gas Company's earnings or any direct and proportional increase in gross revenue.

I feel that at 30 cents per thousand cubic feet the domestic and commercial customers of the Gas Company are paying very much less than the competitive value of the gas and that that gross amount of money obtained by the Gas Company at those prices is and will represent a fair purchase price by the consumer.

The competitive level, you will recollect, Mr. Zinder and Mr. R. E. Davis both placed at approximately 33 cents per thousand for those two particular calculations.

Now as I mentioned a moment ago, the suggestion that the Alberta Nitrogen Company can pay for gas delivered to it on the basis Rate 6, the lowest industrial classification, I think, can at this stage at least be adopted by the Board.

In addition an analysis of the earnings of the Gas Company for 1945 as filed by Exhibit 182 shows that the moneys paid by the consumers to the Gas Company by way of value for the services received by them actually exceeded the costs to the Gas Company in transmitting and distributing that gas, plus an allowance to the Gas Company of a liberal rate of return of  $8\frac{1}{2}\%$  on the net investment of the Gas Company by about \$340,000.00.





Argument by Mr. McDonald.

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I would point out that under the principles set out by Mr. Zinder and which I advocate as applicable in this situation, these monies, that is the \$340,000.00 approximately unquestionably represent a value of the commodity to the consumer which should be carried back to and made available as part of the value of gas to be paid to the producer at the well head as the price for the commodity which he offers for sale.

Now, sir, I have made a summary again based on the rate bases which I have filed at 7% net rate of return of the cost in the field.

SUMMARY PRODUCED AND REFERRED TO  
NOW FILED AS EXHIBIT 192.

Now, sir, Exhibit 192, I have made up showing the cost on a unit basis per MCF for gas delivered from each of the three sources; Madison, G. O. R., and British American.

For 1945 I have taken the actual deliveries as reported by the Companies as a basis. 1946, 1947, 1948, the estimated deliveries related to the forecast given to the parties by Mr. Brownie for the Gas Company.

On the last column I have calculated the overall unit cost for the three years, 1946, 1947 and 1948.

By way of sub-division of costs I have divided the costs into gathering and into scrubbing and then in respect to G. O. R. and British American transmission costs.

Transmission costs are the costs applicable to the investment in the transmission lines from the British American absorption plant to the Madison scrubber and the operating costs in connection with that installation. Similarly in the Gas & Oil Refineries sub-section, the transmission costs





Argument by Mr. McDonald.

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are the investment in the line from the absorption plant of the Gas & Oil Refineries Limited to Madison No. 3 station and from Madison No. 3 station to Hartell and then I have added the costs actually paid or estimated to be paid for the services of the British American line in transporting the Gas & Oil Refineries area gas delivered there.

Now you will note, sir, that on the average overall cost at the bottom of the page and I will deal first with 1945; that the total average cost on the basis of the rate of return and the adjustment of the British American capital investment and the gathering costs of the Gas & Oil Refineries Limited submitted by me, the total cost at the output of the scrubber is 5.798 cents, and deducting this from the previous figure I mentioned, namely, 12.347 cents, as being the monies available for the gas on the assumptions made in Exhibit 182 that there is available gas at the well-head of not less than six cents per thousand cubic feet.

Now projecting similar costs in detail for the field utilities as I have done in the statements which I have filed in respect to each of them except Gas & Oil Refineries Limited, and in that particular case I take an estimate of 1.018 cents as being gathering costs for each of the particular years. We have an overall price for the period 1946 to 1948 of 6.206 cents as the cost of delivering gas to the outlet of the scrubbing plant. Adding to this cost six cents as the value of gas at the well head we then arrive at an overall cost to the Gas Company for gas supplied I should say not only to the Gas Company but to any other customers or consumers of gas, for gas available at the outlet of the scrubbing plant of 12.206 cents for the three year period,



Argument by Mr. McDonald.

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1946 to 1948.

Now, sir, I submit that adding everything together that the evidence warrants the finding of the Board of a price in the neighbourhood of six cents at the well head.

Now, sir, having arrived at that price, there is a matter for consideration, namely the approach to the problem which has been suggested by some producers namely, that the Board fix the price at outlet of scrubbing plant, that their gas be followed back to the area from which it was produced and that from the scrubbing plant there should be deducted scrubbing plant outlet price paid by the purchasers the Gas Company and others, there should be deducted the actual cost of getting that gas to each individual area and that the remaining amount after deducting such costs should then be a field price or a well head price for the gas which is transported to that particular system.

What I have in mind by way of illustration, sir, is taking for rough figures twelve cents as the price at the outlet of the scrubbing plant for Madison gas, deducting as I show in Exhibit 192, the overall price for the three years of 5.265 cents would leave available for the producer in the Madison area some seven cents approximately.

Similarly a producer in the Gas & Oil Refineries area would have available the difference between twelve cents and 10.147 cents. And, in the British American area the difference would be between 8.875 and 12 cents, or 3.26 cents.

Now that is one approach that could be suggested, but that is not what I am advocating here.

This matter was given consideration during





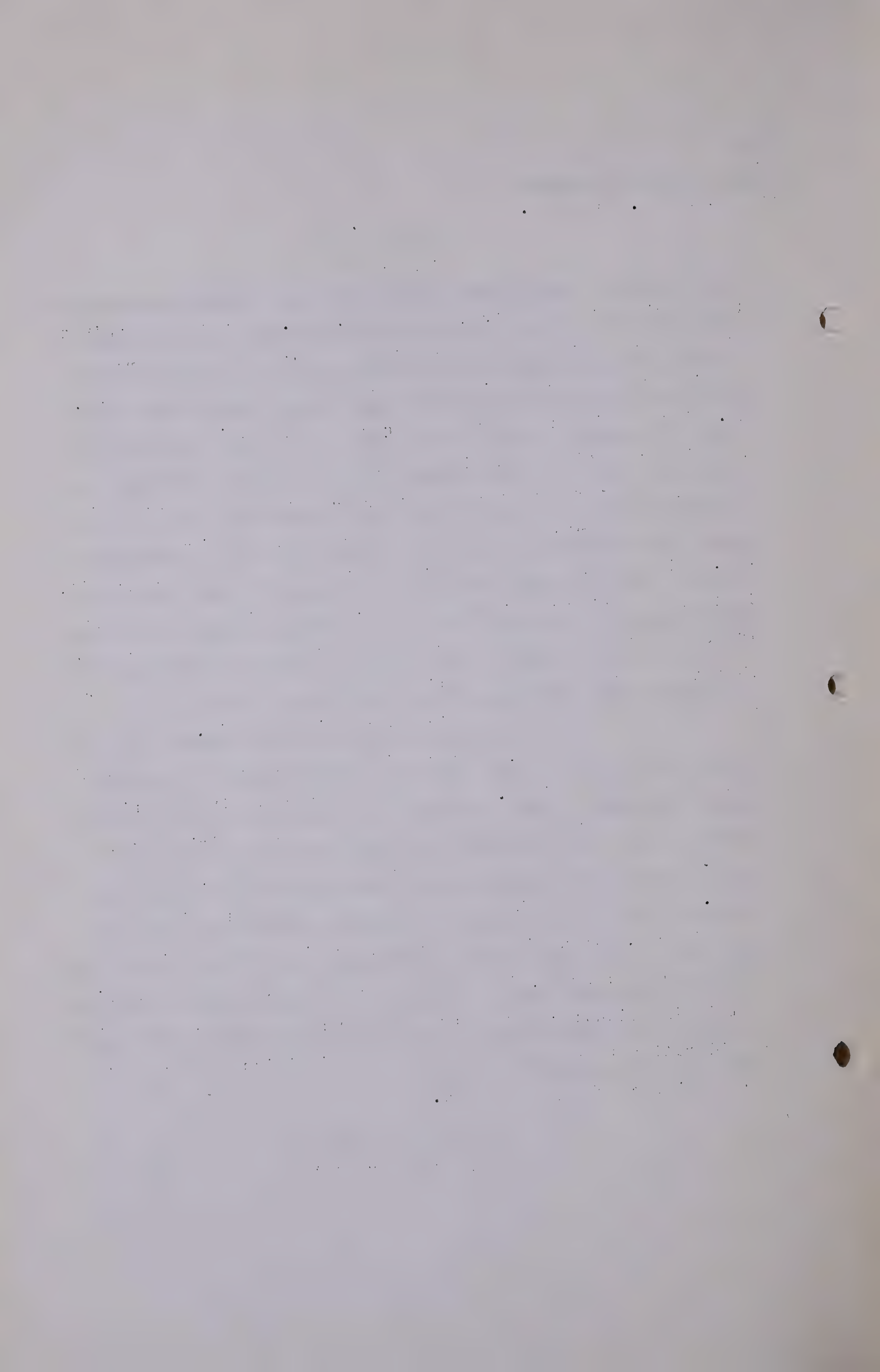
Argument by Mr. McDonald.

- 7095 -

the Hearing at pages 4238, Volume 54. Mr. Zinder was examined with reference to the differential and actual cost of transporting and gathering high pressure gas and low pressure gas. Mr. Zinder pointed out that the gas has an equivalent value - that its commodity value is the same at the well head and he suggested that for that reason there could be no variation in the well head price as between low pressure and high pressure gas. His proposal as I read it or his view as I understand it, is that gathering and transporting costs are items payable by the consumer as part of the cost of getting the gas to him and that the overall cost of getting the gas to the market should be added to the well head price on a uniform basis.

Mr. Zinder pointed out that there are many variations in the field. Not only a difference in gathering costs but there is the difference in the cost of drilling the wells. There is a difference in the quantity of output of wells. There is a difference in the pressures at which gas is delivered. In addition to the major differences between high and low pressure, these differences are so many and so wide that if individual costs by areas or by wells were taken into consideration there would have to be an individual price for each well throughout the field.

( Go to Page 7096 )





Argument by Mr. McDonald.

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At Page 4241, Volume 54, Mr. Zinder pointed out that the problem is one of determining what is the desired unit for production. He pointed out that it is a similar problem to that of determining what is the desired unit for distribution of gas. We have this situation now, Sir, in the Calgary Gas Company, that the unit price of gas, of sales to consumers, is the same at every point of the very widespread Gas Company system, namely, the price at Calgary to the domestic consumer, the commercial and industrial consumer, is the same as the price for a similar service in Lethbridge, Nanton, Macleod, High River and other points.

Mr. Zinder suggests, after consideration of all of the factors which I have mentioned, that the unit for Turner Valley should be the field as a whole.

Now, this matter has been discussed by the Committee which I represent, and I must say that there was a definite difference of opinion in the Committee. The resolution of the Committee was that the Committee do recommend to the Board that the well head price be uniform throughout the field, such price to take into account or to include the producers' contribution, if any, to the costs of any low pressure system. Of the Committee eight members took part in the discussion, four voted in favour, one was opposed, and three did not express an opinion.

Now, Sir, a consideration of this problem raises, to my mind, the question of the actual differential in costs between the different areas in the field.

Now, if you take a look at my summary, Exhibit 192, you will see that the gathering costs of the Madison Company, on the basis of my calculation is 3.134 cents in 1945, and in so gathering the gas is delivered compressed





Argument by Mr. McDonald.

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to 325 pounds or more, at the intake of the scrubbing plant.

In the Gas & Oil Refineries area the actual gathering of wet gas, on my calculation, is 1.018 cents. At the output of the absorption plant the gas goes into the transmission line and by application of pressure is delivered at the scrubbing plant at 325 pounds or better.

Now, the British American area, the actual gathering costs in the British American area part of the field is 3.236 cents. The cost of transmission is 2.830 cents. I feel that before we should compare gathering costs and get down to a differential in price as to the areas in the field that we should deduct from these unit prices, or unit costs per area, the cost of transmission in the main residue gas transmission lines.

These transmission lines are, as I pointed out earlier in my argument, in effect market lines. If there had been a scrubber in place at the British American plant, and a scrubber at the Gas & Oil Refineries plant, I submit that the Gas Company would, in the ordinary course of picking up gas for its customers, have installed the transmission lines which are actually in place there now, and that the withdrawal of these particular costs from the area costs, and allocating them to the field costs as a whole is part of the cost of delivering gas which the Gas Company should be properly chargeable with as the transmitting agents, and I submit that is a fair thing to do in the first instance.

THE CHAIRMAN: What about the compression machinery?

MR. McDONALD: I am referring to the gathering costs, and the transmission from the pipe lines only, not the horsepower required to get the 325 pounds. I am assuming that in these lines the gas is delivered at 325 pounds, is what is





Argument by Mr. McDonald.

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required to deliver the gas at the ultimate destination.

MR. CHAMBERS: Do you get the horsepower somewhere else, the costs?

MR. McDONALD: Just a moment, sir. I will explain that. We will take the Gas & Oil Refineries at 1.018 cents. The 1.018 cents is the per unit cost. Just a minute, sir, I am sorry. I have that at the end of Exhibit 189. The only amount of money involved there is the \$8,965.00 which I have stated is the cost of gathering gas prior to the absorption plant in the Gas & Oil Refineries area.

With regard to the British American area, the transmission charge of 2.830 cents in 1945, is made up of the item on page 3 of Exhibit 187, where it shows the transmission line at \$52,308.00 plus \$11,322.00, being the amount - no, I am sorry, less the payment from the Gas & Oil Refineries' gas of \$11,322.00. The Gas & Oil Refineries' transmission charge is made up of the amount credited to the South residue lines of \$59,654.00.

Now, I am going to point out there, Sir, that there is included in that sum of \$59,654.00 the actual cost of compression in the G.O.R. area.

THE CHAIRMAN: And that is the suction line to that plant and the discharge line?

MR. McDONALD: Yes, the suction line and the discharge line, and to that extent I must qualify my submission regarding the Gas & Oil Refineries. It might be that I will have to submit to you, Sir, a revision of this to make sure that I have not, in attempting to apply my legal abilities to accounting, made an error. But for the purposes of my argument now, I think it gives you the principle which I wished to establish.

1. The first part of the paper is devoted to a general discussion of the problem.

### 2. The second part of the paper is devoted to a general discussion of the problem.

3. The third part of the paper is devoted to a general discussion of the problem.

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Argument by Mr. McDonald.

-7099 -

Now, I am free to admit that the suggestion I make, before we arrive at the question of uniform prices, that we should deduct these transmission costs. In the Madison area we have the South wet gas line which is some five miles in length, and I believe it is an eight or ten inch line, and we have two or three lines to the North which aggregate a very considerable length. But I would submit to you, Sir, that these are in effect wet gas gathering lines. They are not market lines of the same nature as these transmission lines which are dry gas lines.

I want to point out too, Sir, and I think you will all agree, that in giving consideration to this question of conservation in Turner Valley, there were three things that advertised the necessity for conservation more than anything else. These were, first, the flares at the Royalite absorption plant, at which gas in excess of market was being burned, the flare at the British American plant for which no market was available, the the flare of the Gas & Oil Refineries plant for which no market was available.

MR. CHAMBERS:                      There is no evidence of any flare at the Royalite plant after 1938?

MR. McDONALD:                      Oh no, there was no flare there, but I am thinking of the over-all picture prior to conservation installations having been made. I submit that the building of the line from the Madison scrubbing plant to the British American absorption plant, is one of the expenditures that would have been made in carrying out the purposes and the intention of the Act. There is no doubt, too, that the building of a line between the Gas & Oil Refineries plant and the scrubbing plant was also a necessity, something which the Board, on its own initiative, as it were, in carrying out the



Argument by Mr. McDonald.

- 7100 -

implied intention of the Act that conservation of these resources should be made, would have had done, and therefore, I submit that these expenditures should be an over-all cost and not relegated or added to costs of the particular areas.

Now then, if we take the transmission costs out, we find that there was a close comparison between the actual gathering costs in each area, something in the neighbourhood of 3.134 cents for Madison in 1945, from my figures, as compared to the British American area of 3.236 cents. That price, Sir, on my revision of these figures, would be just a bit more, possibly closer to 4 cents.

Now, that differential there is not sufficient that there is in effect discrimination, shall I say, or an injustice done to the producer in the one end of the field and the other.

(Go to page. 7101. )



Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

Argument by Mr. McDonald.

- 7161 -

Now the reason I suggest that is this, by the addition of the reserve in the South End of the field or in any place in the field, there will result in a decrease per unit of gas sold and those costs which are common to the field, such as scrubbing; there will be an increase in the length of time that the field as a whole will be able to meet the peak load requirements. That is in addition to the length of time that the field as a whole will, after peak load requirements cannot be met, will still be able to share in the market available to the field.

Those are the benefits which I say cannot be definitely calculated. They are intangible and they result I think in a differential in cost as between the units in the field in great measure, which is made up by the over-all benefits which I have mentioned. Then on this point, sir, I come to the last point, namely that the purpose of the Act is to make available any market common to all in the field on a basis common to all producers in the field and I say that if there is a differential in prices that it is resolved by the application of the Act into a uniform price. The Board, in applying the authority which it has, is fully justified in establishing a uniform price. I submit, too, that the great danger of departing from the principle of a uniform price gives rise to where are the differences to be left off. Are we going to get right down to wells and classes of wells, all of which will complicate and, I submit, unnecessarily interfere with the proper application of the Act as a whole.

THE CHAIRMAN: I have followed that very clearly, Mr. McDonald. I am still bothering about the low pressure gathering system of the British American.





Argument by Mr. McDonald.

- 7102 -

MR. McDONALD: Well, sir, I would like to make myself clear on that point.

THE CHAIRMAN: Because if you will remember Mr. McDonald the British American said this, or something to this effect: "We want that low pressure gathering system. We are prepared to take the risk of loss if need be." Mr. Reeve came in and he said: "We, the Producers, want the low pressure gathering system." Mr. McCutchin very definitely said that. He said there was no exception in any field that he knew of but that repressuring would improve oil production and that it would extend the life of his plant from 5 to 10 years, something in that order. I may not be altogether right in my figures. And that the producers would gain from the additional revenue that would come from the natural gasoline. The British American definitely said: "We want that system and we are prepared to take the risk of loss." Now are we to pass all of those costs on to the consumer? You have my difficult problem in a nutshell.

MR. McDONALD: Yes. It was in view of that problem that I made the submission that I have as shown in Exhibit 188, where I allocated to the absorption plant  $57\frac{1}{2}\%$  of the capital charges of the entire British American gathering system, including the low pressure plant.

THE CHAIRMAN: Would it be equally sound if you reduced the rate base and then made the same allocation as to the balance that was left?

MR. McDONALD: Well I am making this suggestion, sir, I mean I just want to be clear on what you have in mind. I am making my suggestion on the basis that I have made an over-all reduction in the British American rate base.



Argument by Mr. McDonald.

- 7103 -

THE CHAIRMAN: In other words, your discount in the rate base is taken up on the costs allocation?

MR. McDONALD: I have made my discounts and I am going to make this additional discount of  $57\frac{1}{2}\%$  of the capital charges.

THE CHAIRMAN: Yes, but your original discount relates only to the difference between the original estimate and the finished article, does it?

MR. McDONALD: Yes. I have not taken the low pressure system out and dealt with that.

THE CHAIRMAN: No.

MR. McDONALD: I will be frank to say I gave much thought to that problem and I discussed that problem with my committee.

THE CHAIRMAN: In dealing with Exhibit 192, in effect you say this, if the Board had put in the Madison A Plan then all this compression machinery required to take the gas from the British American and the G.O.R. to the scrubbing plant would have been required and those transmission lines would have been required.

MR. McDONALD: Yes.

THE CHAIRMAN: And therefore I, in making my calculations, should forget about there being three installations and treat it as if it were one.

MR. McDONALD: Yes.

THE CHAIRMAN: And thereby effect a uniform price all over the field?

MR. McDONALD: Yes.

THE CHAIRMAN: And a uniform result at the gate.

MR. McDONALD: That is it. I have resolved the question of the additional benefit, as it were, to the absorption



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Argument by Mr. McDonald.

- 7104 -

plant and the low pressure system because it went below 50 pounds at the well-head in allocating to the absorption plant 57½% of the capital charges. The remaining capital charges are left in the consumers' hands. But as I pointed out this morning that is reflected in the over-all price and in part is paid by the producer insofar as it does affect his net return. I might point this out, sir, that in the resolution which I referred to of my committee that it was expressed that where there is . . . . They were aware that the gathering of low pressure gas was more expensive than high pressure gas but they felt that even if those additional charges are made that there should be no differential in the price at the well-head either low or high pressure.

THE CHAIRMAN: I am inclined to agree with that at the moment.

MR. McDONALD: In other words, they want any cost of gathering, whether high or low pressure, absorbed in the over-all price.

THE CHAIRMAN: But if they get the same well-head price at the high pressure well and if the costs of gathering are higher at the low pressure well, why should not they stand some of that cost. You say that is what you have done in your allocation.

MR. McDONALD: That is not what I have done in my allocation except indirectly, in that I have apportioned to the absorption plant in the South End an excessive amount of the capital charges for the gathering system.

THE CHAIRMAN: Your high pressure wells in the South End are 150 pounds or better?

MR. McDONALD: Yes, that is true.

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Argument by Mr. McDonald.

- 7105 -

THE CHAIRMAN: And anything below that it requires a different system and costs more than it does to gather the 150 pounds or greater.

MR. McDONALD: There is no doubt about that. But on the over-all picture there is a benefit to the high pressure man because of the effect on the over-all price of having practically twice as much gas to gather to be transmitted through the common transmission line and the common compressor station.

THE CHAIRMAN: And then the converse view, of course, Mr. McDonald, is this: That on your basis and including the low pressure system it just means that the North End of the field is going to subsidize the excessive cost of gathering that low pressure gas.

MR. McDONALD: Yes, to this extent, sir. They will subsidize that system during the period that the investment is still outstanding but after the investment has been taken care of by amortization and there is a corresponding decrease in the rate of return, there will be still available for the producers in the field as a whole an additional amount of money represented by the gas still being available in the area which is going to market free of these excessive charges, and in that way there will be an evening up as it were over the life of the entire field of those earlier costs, because the benefit of this additional gas will be reflected in the scrubbing costs for instance in the later years and the over-all transmission costs.

THE CHAIRMAN: And out of eight of your Committee, four had one viewpoint, one another and the other three either did not have one or were afraid to mention it, is that right?



Argument by Mr. McDonald.

- 7106 -

MR. McDONALD: Well sir, I must tell you who they were. There was a representative of the British American and Royalite Company and Gas & Oil Refineries, they were the three that did not vote. They took the view . . . . well they did not express any opinion.

MR. CHAMBERS: Were all your Committee there?

MR. McDONALD: Yes, I am afraid they were. There were more.

THE CHAIRMAN: So you throw the baby in Solomon's lap. Thank you very much.

MR. McDONALD: Well, not without providing you with some evidence upon which to base an opinion favorable to that which I have been advocating. The only witness who dealt with it at all was Mr. Zinder and I think his view is one that can be adopted by the Board.

THE CHAIRMAN: Well, you personally have been very helpful, Mr. McDonald. There is no reflection so far as that part is concerned.

MR. McDONALD: I had one additional thought to mention to you. I may think of it before I sit down.

That brings me, sir, to the end of my presentation as to price. I have not as yet dealt with the question of deficits.

THE CHAIRMAN: With what?

MR. McDONALD: With the net deficit in the operation for the utility companies in 1945 and the possible deficit in 1946. Now on the basis of my submissions I figure the situation to be this. Madison received in 1945 as shown by Exhibit 158, \$1,204,972.00 by way of revenue. Taking the required earnings of Madison on the basis of Exhibit 186





T-3-8

Argument by Mr. McDonald.

- 7107 -

the costs which Madison must receive are \$770,069.00. Now I might point out, sir, that in my calculation of operating expenses, I credited or added to the costs attributed to Madison the sum of \$12,000.00 as being paid to British American. I now find, sir, that the \$12,000.00 is absorbed in direct expense, so that in fact I should not have added that amount.

(Go to page 7108)

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Argument by Mr. McDonald.

- 7108 -

Using my figure here of \$750,069.00 as the figures shown on page 2 of Exhibit 186, less \$12,000.00.

To that figure I have added the cost of gas to the Madison Company actually paid at \$444,440.00, giving the over-all cost required by Madison of \$1,194,509.00, which would show a surplus on the 1945 operation of \$10,463.00.

The British American Utilities Limited, I find the required earnings or costs on the basis of my Exhibit 187 for 1945 as being \$189,754.00. For gas purchases, I take the figure mentioned when Exhibit 144 was presented, \$61,473.00, making the total required of \$251,227.00.

The revenue received by British American Utilities in 1945, as shown by Exhibit 164, is \$183,754.00. This would leave a net deficit of \$67,473.00, and in this amount is the amount required to pay the producers who delivered gas to the British American system, 2 cents per thousand cubic foot.

With regard to Gas & Oil Refineries Limited, the gathering costs which I calculated amount to \$8,965.00, and that also is a deficit.

The total deficit then is \$73,438.00. There is an apparent surplus in Madison of \$10,463.00, leaving a net deficit to be taken care of, of \$62,975.00.

#### S T A T E M E N T

On the basis of the statements filed by me I calculate the deficit as follows:

##### MADISON

Revenue Received 1945:		
(Per Ex. #158)		\$1,204,972.00
Required Earnings:		
Costs:	\$750,069.00	
Gas Purchases:	<u>444,440.00</u>	<u>1,194,509.00</u>
<u>SURPLUS:</u>		<u>\$ 10,463.00</u>



Argument by Mr. McDonald

- 7109 -

BRITISH AMERICAN:Required Earnings:

Costs:	\$ 189,754.00	
Gas Purchases:	<u>61,473.00</u>	\$ 251,227.00
<u>Revenue:</u>		<u>\$ 183,754.00</u>
<u>DEFICIT:</u>		<u><u>\$ 67,473.00</u></u>

G.O.R.:

<u>DEFICIT:</u>	<u><u>\$ 8,965.00</u></u>
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S U M M A R Y

Total Deficit:	\$ 64,473.00	
	<u>8,965.00</u>	\$ 73,438.00
Surplus:		<u>10,463.00</u>
<u>NET DEFICIT:</u>		<u><u>\$ 62,975.00</u></u>

Now, I submit, Sir, along the same basis as suggested by Mr. Chambers and Mr. Harvie, that this should be taken care of as soon as possible, possibly in the next three years.

Now I might point out that in my own calculations I was liberal in my operating expenses and I believe there is ample leeway in the prices which I have quoted provided the rate base which I have indicated is adopted, to take care of these additional charges.

Now, Sir,.....

THE CHAIRMAN:  
losses?

Was not some arrangement made about

MR. McDONALD: Well the losses, Sir, I think if I recollect, - I just forget the Order Number, were to be.....



1. Introduction

## 2. Methodology

2.1. Data Collection

2.2. Analysis

2.3. Results

2.4. Discussion

2.5. Conclusion

## 3. Results

3.1. Data

## 4. Discussion

4.1. Data

4.2. Discussion

4.3. Conclusion

## 5. Conclusion

5.1. Data

5.2. Discussion

5.3. Conclusion

5.4. Discussion

5.5. Conclusion

5.6. Discussion

5.7. Conclusion

5.8. Discussion

5.9. Conclusion

5.10. Discussion

5.11. Conclusion

5.12. Discussion

5.13. Conclusion

Argument by Mr. McDonald.

- 7110 -

THE CHAIRMAN: Added to the rate base.

MR. McDONALD: Added to the rate base.

Now I am not particularly in favour, Sir, of adding the losses, particularly as they resolve themselves to an amount of some sixty thousand dollars.

MR. CHAMBERS: Order No. 9.

MR. McDONALD: To the rate base. I would prefer that it be taken care of, if possible, during this period which we know or have a fairly definite assurance, that the Nitrogen Plant will be on the market, and it is a deficit too which is in fact payable by the consumers in 1945, and I think if the recovery of that deficit is related to the years as close as possible to 1945, that the chances are that the consumers who obtained the benefit of the cheaper gas will be the consumers who will pay for it. I am not certain, Sir, that it is a type of expenditure that, under all of the circumstances, should be added to the rate base and made subject to the rate of return when that is fixed.

Now, Sir, I was going to make some comments with regard to the matter of "Royalties" in view of a submission made by the Royalite Company.

I might say this, that during the course of the year I have corresponded with the Minister of Mines and Lands with the suggestion that the Department make some representations before the Board if they thought it advisable and generally to deal with the problem. I have been having my discussions with Mr. Bailey latterly, and he informed me at the end of the week that he had further correspondence and I would like to defer anything I have to say until I have had an opportunity of discussing the matter further with him.





Argument by Mr. McDonald.

- 7111 -

The point involved is, first, whether the net, whether the minimum Government royalty of 1/4 cent per thousand cubic feet should be made applicable to gas sold at the discounted rate for storage purposes, and, secondly, should the Government agree to accept 15% or whatever rate should be fixed by Order-in-Council of the discounted price when currently paid or whether the Government will be content to allow the gas to be stored without the payment of royalty and then subsequently, upon reproduction, collect the full royalty on the then current market price.

Dealing, Sir, with the question of the sharing position.

I feel that the submissions made both by the Madison Company and that by the British American are practically identical in results. The differences that in the earlier part of the hearing which developed between the two companies and myself representing the producers, I think, have been resolved by the statements made by Dr. Katz, and I can see no useful purpose of discussing the sharing position further now, Sir. I think they will be definitely agreed upon.

There is one matter, Sir, and that is the Order or proposed Order dealing with the pooling arrangement in the South End. The difference there, Sir, as I outlined it the other day is a matter of resolving details rather than a question of principle. It is an Order that requires the consent, I believe, of the Conservation Board and as soon as the Board has, as soon as that Board is in a position to definitely state whether the allowables of the input wells are to be added to the allowables of the remaining wells in the gas cap, that will be in production from time to time, or whether the allowables of the input wells



Argument by Mr. McDonald.

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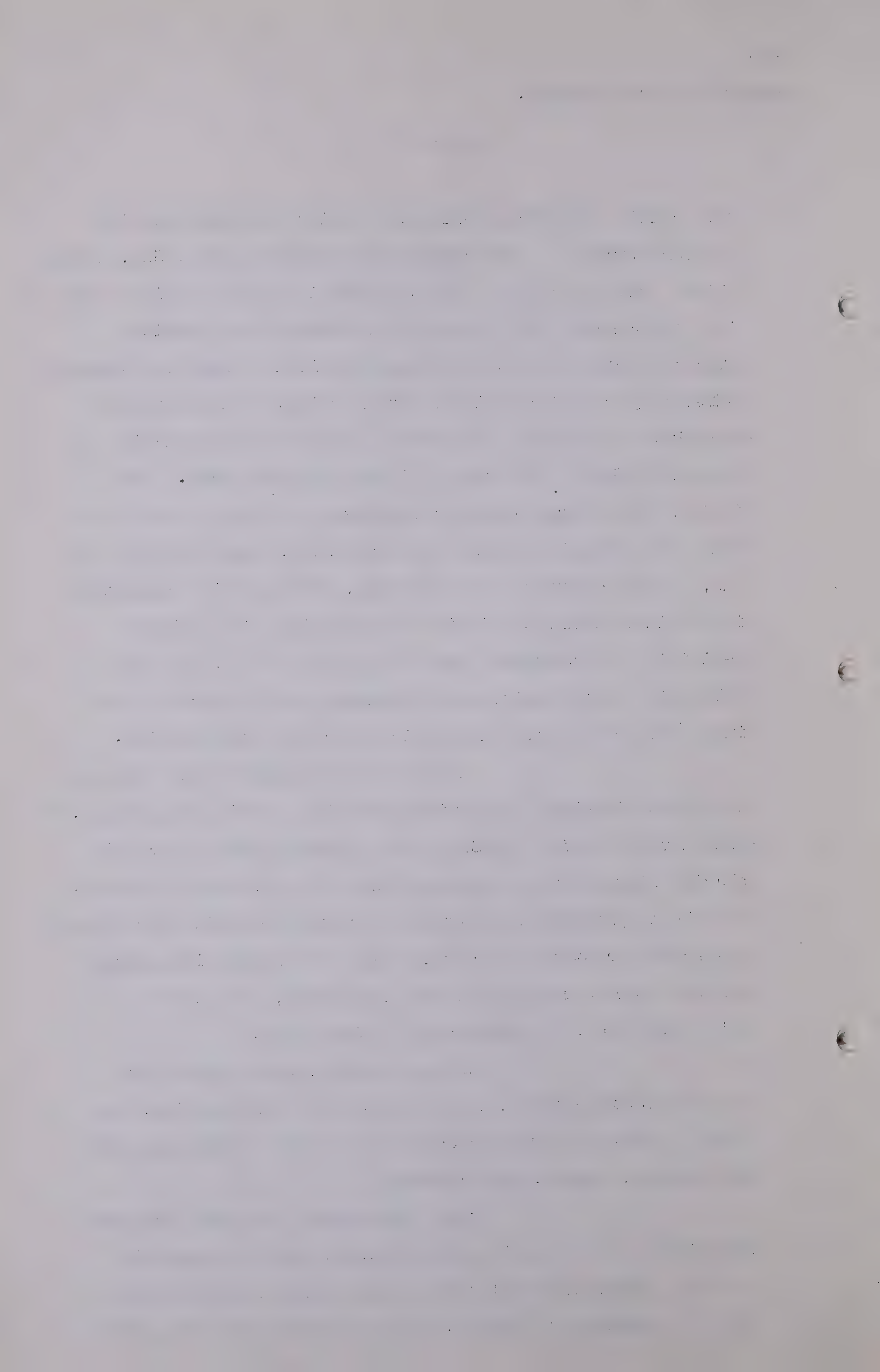
will remain unproduced during the period the wells are in use for storage. The difference between the two, Sir, is that which was referred to by Mr. Harvie in which he pointed out that in the current 1945 operating expenses of the British American Company there was charged an item of some two thousand dollars by way of rentals for input wells. This rental was determined as being the net worth of the actual production of the allowable of that well if it had been produced. Now if it should happen that the Conservation Board should state that this allowable cannot be transferred, then in effect the gas, to the extent of the allowable, is then being conserved in the input well, and it is the outlining of a workable definition of "conserved gas in the input well", and the allocation or the raising of the money to take care of the input well expenses, that requires further consideration.

If it should transpire that there is an expense involved in providing the input wells for storage, I think I should point out, Sir, that the South End producer is placing himself in the same position as the Royalite Company, that he is prepared to provide the storage capacity for storage gas free of cost to the consumer and if a rental is involved for the storage capacity of the input well, that would be a fair charge to the producer in the South End.

It is a matter, apart from those carrying storage costs, which I discussed this morning, and which I advocated are a charge to the party benefiting from the storage, namely, the consumer.

This morning, Sir, we also discussed Exhibit 88, and I should point out, Sir, that that exhibit, that the arrangement set out in that exhibit, may possibly only be temporary in effect. In other words, as soon as the





Argument by Mr. McDonald.

- 7113 -

amount of gas available for the G.O.R. transmission line is equivalent only to the capacity of the line and does not exceed it, it may be that the Gas and Oil Refineries' refinery market and the consumers' market attached to that system, should then come into the market position as a whole, but until that time arises I do not think that it need be considered. It will be incidental, however, to the fixing of prices throughout the field as a whole, that those prices be fixed, the price to the Gas & Oil Refineries be fixed, and I suggest it be fixed at the well head price plus the cost of gathering, attributable to delivering gas to it, and that that equivalent price be carried on to the domestic consumers.

There is just one further matter, Sir, by the way, which was mentioned or referred to several times during the Hearing, and that was the allocation of fuel costs.

You will recall, Sir, that Mr. Hamilton submitted in his evidence that gas used for fuel should be accounted for, not only accounted for as it is now, but that a price should be fixed for it so that the relevant actual costs of the service unit can be ascertained.

I feel, Sir, from the viewpoint of the producers, that this is a commendable suggestion. I feel, however, right at this particular stage that the introduction of that complication, as it were, in the whole picture, may lead to some differences in the submissions as they are now filed, and it may be that, for the present, the matter could or should stand over.

I hope, Sir, I have covered as many of the points as you would wish to hear me on. I have no other that I can suggest.

THE CHAIRMAN: And I do not detect any that you have omitted, Mr. McDonald. You have been very helpful indeed.





M-4-1 - 3.15 P.M.

Argument by Mr. Saucier.

- 7114 -

MR. SAUCIER:-

Mr. Chairman, I have been retained by some producers in the north end to submit to the Board the opposite to the argument submitted by Mr. McDonald in respect to the particular matter in which a difference of opinion arose in the Producers Committee as described by him.

I am instructed by Major Oil Investment Limited, which has eight producing wells in the Madison area, by Atlas Investments Limited which has two producing wells, being Nos. 2 and 3 in the same area, by Maryland Petroleum Limited which has one well and by Continental Oil Well Company of Canada, which has one well in the Madison area.

Now, sir, I would like to make clear that my instructions from these Companies in no way indicates or implies any criticism or dissatisfaction on their part of the very able way in which my friend Mr. McDonald has represented the producers as a group throughout this Hearing, and the purpose of my instructions is simply to assert the views of these Companies on a question upon which a conflict of interest has arisen as indicated by Mr. McDonald.

Now, sir, according to my instructions there is an appreciable difference in the cost of gathering and transmitting gas from these various areas. My argument is predicated upon that information and upon that assumption. If the Board comes to the conclusion that upon all of the evidence there is no difference, then I will not have wasted very much of the Board's time and it will be a question which will not arise for decision.

According to Mr. McDonald's statement here it does appear to me, Exhibit 192, that there is an appreciable differential. With regard to what he refers to as the



Argument by Mr. Saucier.

- 7115 -

transmission costs which are shown only in the case of gas from G. O. source and gas from B. A. source, there is a substantial item for transmission in each case which does not arise in the Madison area.

So far as my clients are concerned, sir, we take the position that we should not be called upon to bear any part of that so-called transmission cost and any issue which may arise as to who should bear it is of course no direct concern of ours provided that we are not called upon to bear it or any part of it, but the Board will bear in mind that what may appear to be a very small difference in unit cost and my learned friend, Mr. McDonald, as I understood him indicated that he would revise Exhibit 192, and that these items for gas gathering in 1945 would be for B. A. source, and would be something in the neighbourhood of four cents, but that difference of perhaps approximately a cent between the gathering cost in the B. A. area and in the Madison area, will amount to a very large sum of money over a period of three or ten years.

The submission of my clients is that we should not be called upon -

MR. HARVIE: May I just interject there. I am wondering if my learned friend is correct in what Mr. McDonald actually said. I think probably he did say it, but I think the fact is that the G. O. R. transmission cost would be changed rather than the British American inasmuch as that 8.138 cost includes compression.

THE CHAIRMAN: And the B. A. figure has to be separated.

MR. HARVIE: He was talking of the G. O. R. 8.138 and the B. A. is 2.830.

MR. McDONALD: The error I discovered was in regard to the





Argument by Mr. Saucier.

- 7116 -

Gas & Oil Refinery sources. I had omitted to leave out of the transmission charge the compressing charge which would then be transferred to gathering. It will make - it will lower the transmission, possibly by three cents and raise the gathering up to four cents. On the basis of 880,000 cubic feet, that is on G. O. R. I believe the British American source is correct.

MR. HARVIE: Yes, I think it is.

MR. SAUCIER: Apparently I misunderstood that and if I was mistaken I retract it.

THE CHAIRMAN: One other thing I would like to ask Mr. McDonald now, Mr. Saucier, in the Madison gathering 1.314 that delivers the gas to the scrubbing plant ?

MR. McDONALD: Yes sir, that includes compression. That is also the gathering in the south end of the field on the 60 pound system through the Madison No. 3 station.

THE CHAIRMAN: Actually there is some transmission in that, Mr. McDonald, is there not. I realize it is difficult where to draw the line where you have taken anything behind the absorption plant is gathering.

MR. McDONALD: Yes, anything behind the absorption plant is gathering and anything that is dry gas, residue gas, is transmission.

MR. SAUCIER: Mr. Chairman, the position of the Companies I represent is simply that we submit it would be neither just nor reasonable that we should be called upon to subsidize either directly or indirectly the producers in the south end of the field and our reasons for taking that position are briefly two;

We say in the first place that we derive





Argument by Mr. Saucier.

- 7117 -

no benefit whatsoever from this low pressure gathering system in the south end of the field. That was by an Order of the Board as I understand it, made before I came into these proceedings upon the application of the British American supported by the south end producers. Obviously that system benefits the B. A. It benefits the south end producers and so far as my argument is concerned I am prepared to assume it benefits the ultimate consumer in the dry gas market, but in our submission it does not in any appreciable way benefit the producers in the north end of the field.

THE CHAIRMAN: Some of those things are relative Mr. Saucier. Actually there are four gathering systems. The Madison is a gathering system. Then the B. A. is a low gathering system. G. O. R. is the lower one and the B. A. low pressure is the lowest one of them all. Which one are you talking about. You say you do not get any benefit from the low pressure ?

MR. SAUCIER: I am referring to the B. A. low pressure in the south end, sir, and I ask for the Board's indulgence if I make these sort of slips because I came into this two years after everyone else and needless to say I have not had the opportunity of reading the transcript or going over the evidence and I stand corrected.

THE CHAIRMAN: That is quite all right.

MR. SAUCIER: Now I submit the south end producers have obtained the benefit from this B. A. low pressure gathering system and (1) the absorption plant product,  
(2) share in the dry gas market,  
are now in effect coming forward and asking for a further benefit at the expense of the north end producers who are



Argument by Mr. Saucier.

- 7118 -

getting none of these benefits by asking the north end producers to share the differential in cost of delivering the gas to the scrubbing plant and I submit that it is neither just nor reasonable that the south end producers should be given this further benefit or should be placed in the position of receiving a subsidy from the producers in the north end, and secondly, sir, our second point is simply this, a good deal of our low pressure gas in the north end is being flared because as I understand it there is no low pressure gathering system in the north end comparable to this B. A. system, and I submit that that is an additional reason why it should be unreasonable and unjust to compel us to bear a part of the cost of this B. A. low pressure gathering system in the south end from which we get no benefit while we have some of our low pressure gas actually being flared.

Now I have attempted to make a calculation just to indicate to the Board the magnitude of this subsidy based upon statements, that is Exhibits which have been filed in the Hearing since I first appeared and commencing with Exhibit 184 which was filed by British American at Page 9, I find that on the basis of their submission, the 1945 costs for gathering, compressing and delivering to Madison scrubbing plant, the gas scrubbed and marketed in 1945 from the so-called B. A. area was \$248,072.43, and then turning to Exhibit 181, which was filed by Mr. Chambers, statement No. 2 shows that in 1945 there were 3,122,159 MCF of scrubbed gas sold from the B. A. area.

Dividing the number of MCF into the first mentioned figure gives me 7.97 cents per MCF for delivering the B. A. gas upstream Madison scrubber. Then turning again





M-4-6

Argument by Mr. Saucier.

- 7119 -

to Exhibit 181, statement 2, shows that Madison averaged 1945 costs per MCF for delivering 12,509,244 MCF and I get that figure by adding the gas from the crude area and from the gas cap being 7,685,171 and 4,824,073 upstream Madison scrubber plus cost of scrubbing at 6.0472 cents per MCF.

( Go to Page 7120 )

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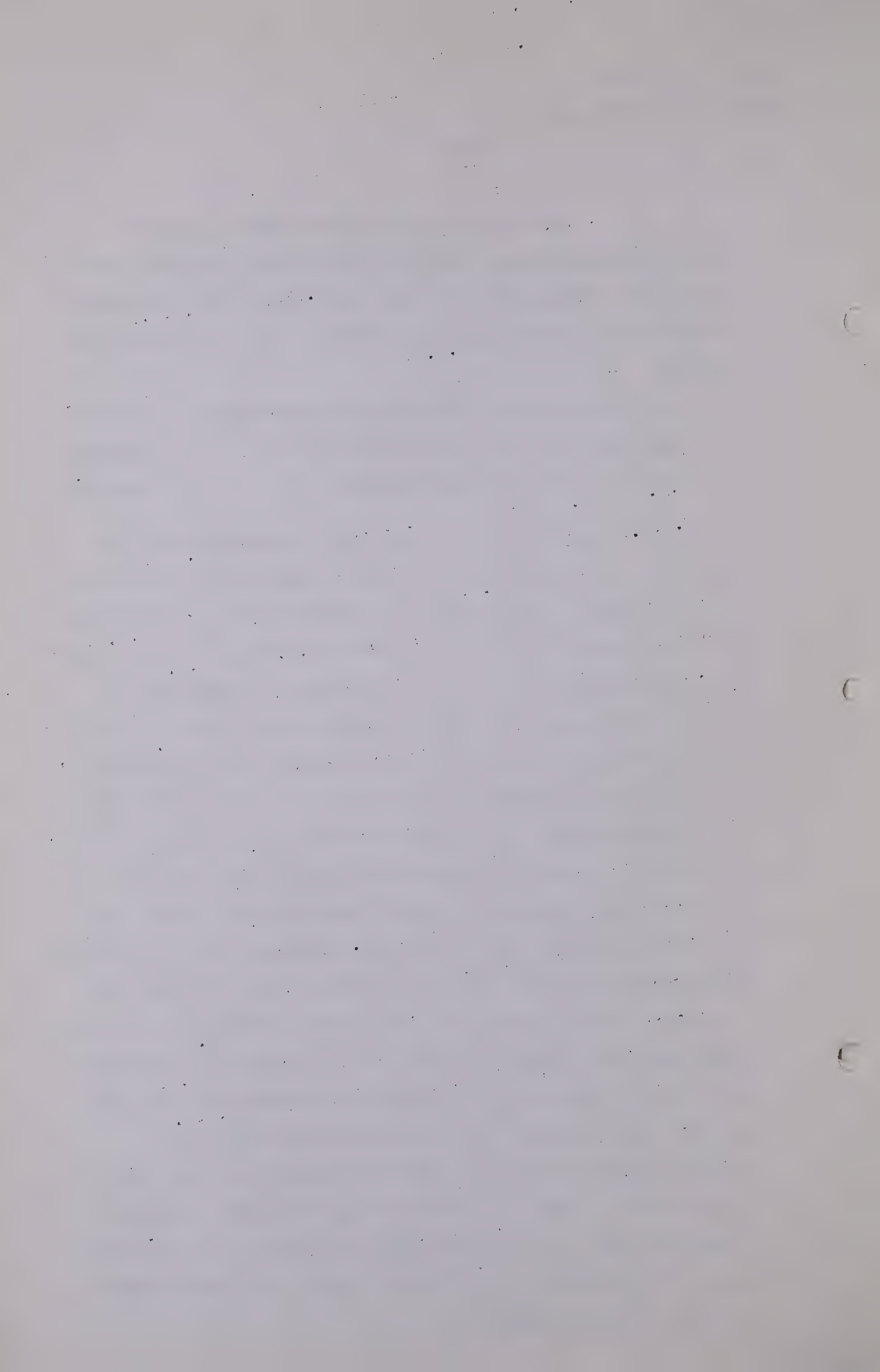
Argument by Mr.Saucier.

- 7120 -

And then Exhibit 181, Statement 1, page 1, shows Madison's average scrubbing costs were 2.131307 cents per M.C.F. Therefore, the laid down cost of the North End of the Madison system gas was 3.9159 per M.C.F., computed as follows:

The cost per M.C.F. inclusive of scrubbing,	6.0472¢
And deducting the scrubbing cost of	<u>2.1313¢</u>
Gives the cost upstream scrubber at	3.9159¢

And then the cost of the gas upstream Madison scrubber is B.A. gas 7.97 cents per M.C.F., and Madison 3.9159 cents per M.C.F., making a difference, Sir, according to my calculation, of excess cost of B.A. over Madison of 4.054 per M.C.F. And the total excess for the 3,122,159 M.C.F. of B.A. gas upstream Madison for 1945 was, therefore, that figure, namely, 3,122,159 times the amount of the excess, being 4.05 cents, which gives me a figure of \$126,447.43. And if the well head price were to be fixed as requested by my learned friend, as urged by my learned friend, Mr. McDonald, at a uniform figure for all the wells or areas throughout the field, and on the basis of the price to the Gas Company, less all utility charges, then for 1945 the \$126,447.43, being my figure for the B.A., excess costs, would be prorated over all the market, being B.A. plus Madison for 1945, to the extent of .88 cents per M.C.F., which figure I arrive at by adding the B.A. gas and the Madison gas, which gives me 15,631,403 M.C.F. and then dividing that into the total amount of the excess, \$126,447.43. And on that basis the North End producers would, in 1945, bonus or subsidize the producers in the B.A. area to the extent of \$110,081.34, being .88 cents times the total Madison production.



Argument by Mr. Saucier.

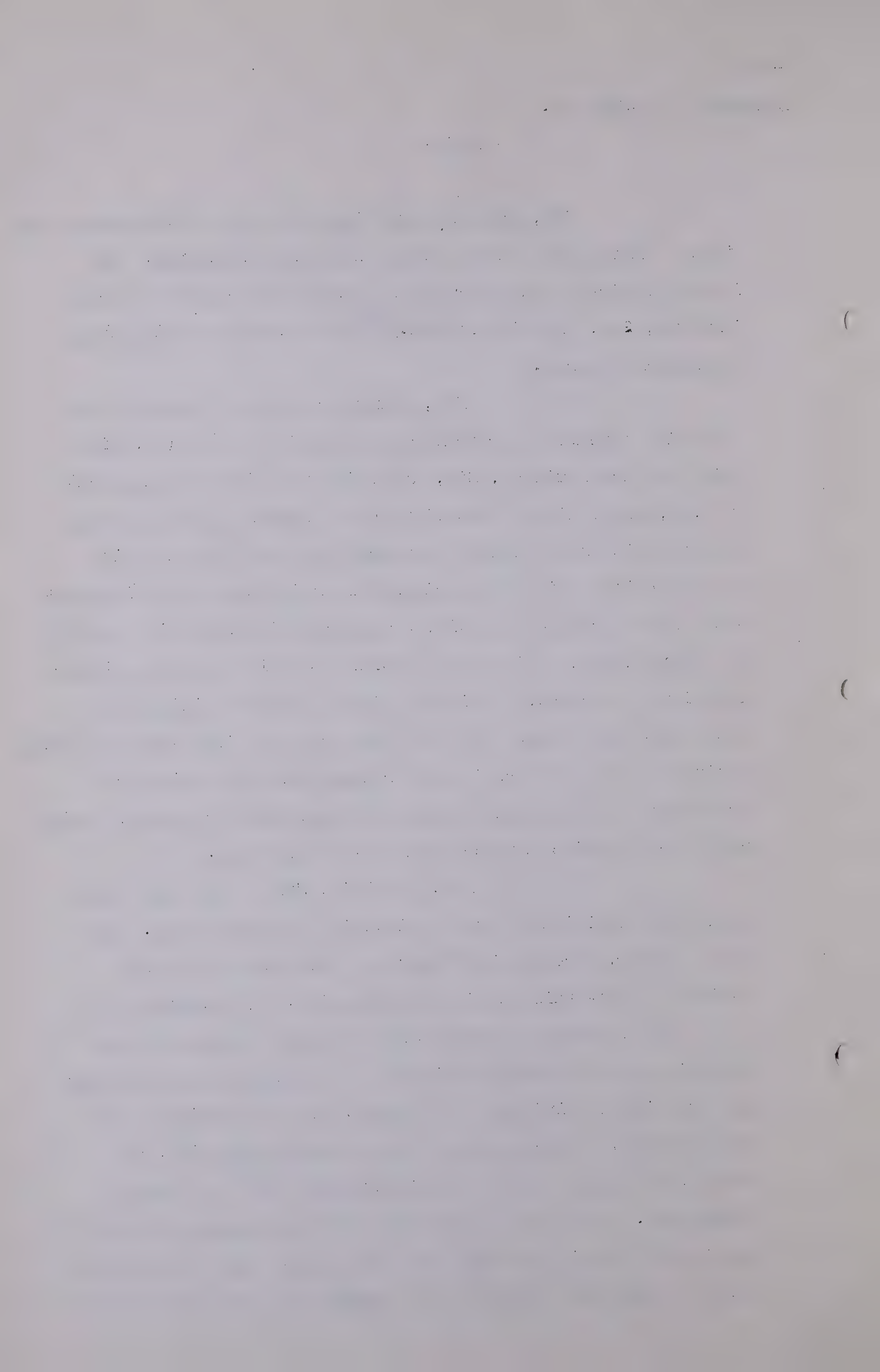
- 7121 -

Now, that is just given by way of illustration and is a calculation which I offer with some diffidence, but it does indicate that there is a substantial amount of money involved, Sir, in this problem,<sup>and</sup> that we are not arguing about negligible figures.

Now, coming to the Act itself, I am directing attention particularly to Section 72 (1) (a), with which you are familiar, Sir, and which was added by amendment in 1945, and I direct attention to the latter portion of that section which specifically provides that the Board may fix and determine different prices for or in respect of different sections or areas of a field, or may classify wells in a field in groups and fix prices for natural gas paid from such classifications or groups, and in the fixing and determining of such price or prices, the Board may adopt any just and reasonable basis or method of arriving at or computing such price or prices as the Board may deem to be applicable or proper, having regard to all circumstances and factors involved.

Now, I submit, Sir, that the Legislature has anticipated such a situation as exists here, and that a just and reasonable basis or method can be readily devised to meet this particular situation. My submission is that such a method or basis could be simply stated without involving any practical difficulty or complication in practice and avoiding any injustice to anyone. And my submission is simply that the price payable to the Gas Company will, of course, be fixed. The cost of scrubbing will be fixed or determined. The cost of gathering and compressing and transmitting can readily be fixed for each area. And the well head price in each area arrived at by taking the price paid by the





Argument by Mr. Saucier.

- 7122 -

Gas Company, less the cost of scrubbing and the other costs, fixed and applicable to each particular area, and by that comparatively simple and practicable method I submit any injustice or inequity as between producers in different areas can be avoided.

Now, my learned friend, Mr. McDonald, argued that because the argument that I am advancing could be carried in theory to a logical conclusion, that the gas from each well should be dealt with separately, and that therefore that invalidates my whole argument. But I submit, Sir, that is obviously fallacious, and the difference between my proposal and between any suggestions that there should be a different price fixed for each of some hundreds of wells, is simply that the one is reasonable and practicable and the other obviously is not.

Now, with regard to Mr. McDonald's argument, founded upon a statement that the Gas Company receives the same price for gas at various different points in the Province, I submit that the situation bears no analogy whatsoever to the situation here, because he has not shown that there is involved in the situation he describes with respect to the Gas Company, any bearing of costs of one producer by another producer, and he is dealing with the other end of the price structure, and a situation which bears no analogy to the point I am discussing.

THE CHAIRMAN: Excepting that I think, Mr. Saucier, if you analyzed the position you might be forced to the conclusion that Calgary is subsidizing Lethbridge, that Lethbridge is subsidizing High River, and that High River is subsidizing Claresholm. You might find that.

MR. SAUCIER: Yes, that might be so. And even if





Argument by Mr. Saucier.

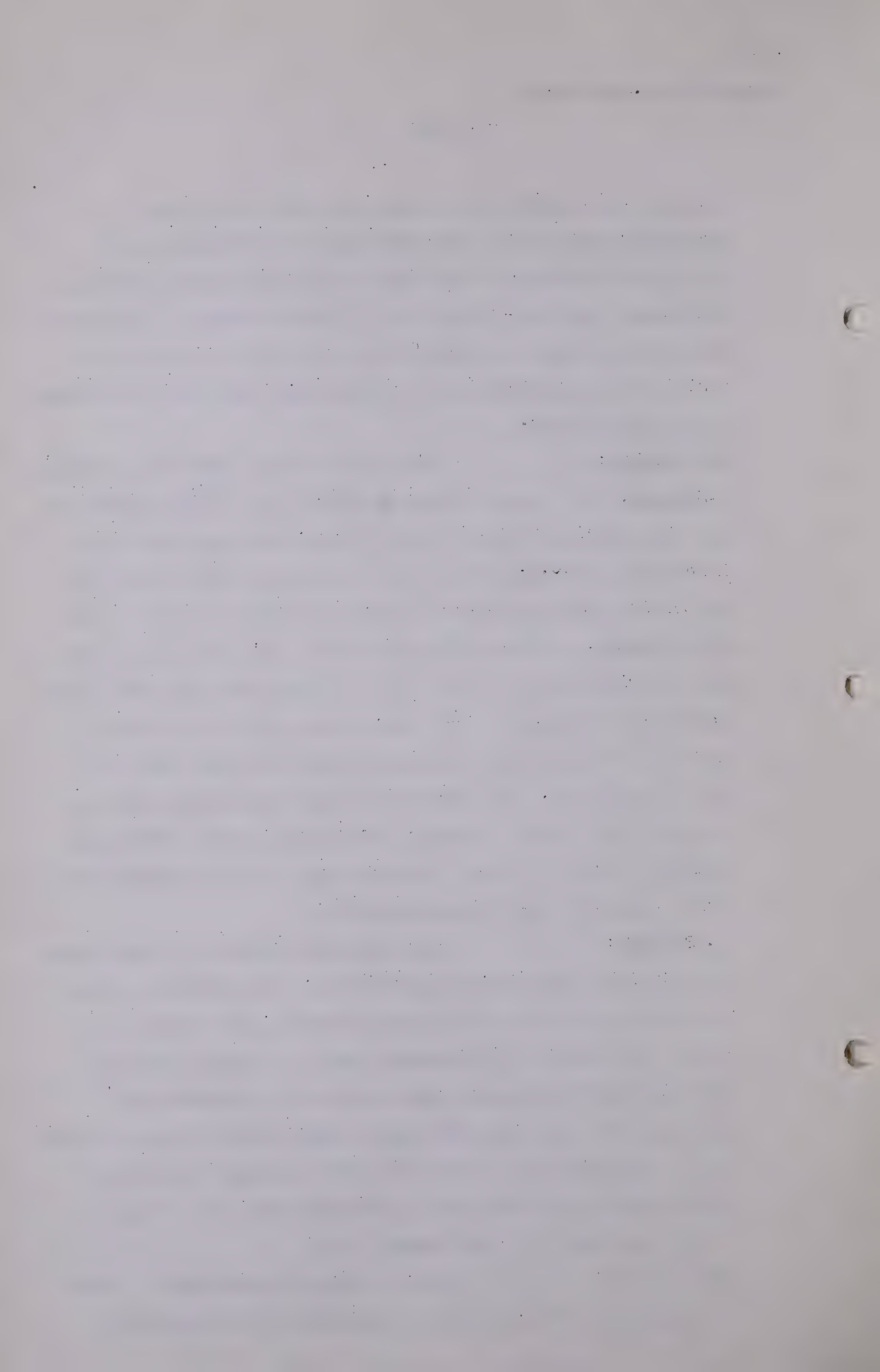
- 7123 -

it were so, I submit that there are undoubtedly good practical reasons for that situation in a distribution of the gas to consumers. But here we have an entirely different situation, and I submit we have no valid reasons suggested why the North End producers of gas should be called upon to subsidize the producers in the South End, and that is the crux of the whole matter.

THE CHAIRMAN: There is one point there still though, Mr. Saucier, you have a situation where gas is being wasted in the oil-producing zone of Turner Valley, you have gas being flared at the G.O.P. plant, and you have gas being flared at the British American plant. Now, supposing Madison or some other company, it does not matter which one, had put in one gas gathering system to take all of that waste gas from those two plants and from the oil zone, would not it be rather difficult to adopt the argument that you are now using as to those two plants, forgetting about the low pressure system. I cannot quite see it through, Mr. Saucier, but I think they would be forced to a unit operation like the Gas Company uses a unit operation for its distribution.

MR. SAUCIER: Well, I am not advocating in principle any principle of universal application. My submission simply is that here we have two sets of producers, and there is no reason why one set of producers should be called upon to subsidize the other under these particular circumstances. And I say that any rule that may be applicable to one particular set of circumstances may for practical reasons be entirely inapplicable to another set of circumstances, and I think that is the best way I can answer that.

THE CHAIRMAN: Well, all right, Mr. Saucier. Take this for an example, here is a well in the oil zone which



Argument by Mr. Saucier.

- 7124 -

cost \$150,000.00 to drill. It has produced enough oil to repay its capital investment and interest several times. Then you have another well which is producing oil, but it never will produce enough oil to pay out its capital investment, and you still have a third well which has no oil at all. But all of these wells are producing gas. Now, how do you fix a well head price that is just and reasonable to all three?

MR. SAUCIER: I don't know.

THE CHAIRMAN: Without involving the very thing that you are talking about.

MR. SAUCIER: Well, I don't know, sir, and that is my answer.

THE CHAIRMAN: And you have lots of company, Mr. Saucier.

MR. SAUCIER: But I do submit, Sir, respectfully, that all of these other difficulties, and there are many of them, do not constitute difficulties in the way of giving effect to the argument that I have submitted to the Board with regard to the position of these two respective groups of producers in different areas.

Now, my learned friend, Mr. McDonald, just to deal with one or two other points that he raised, and then I am through, he suggested that because the South end producers had been brought into the dry gas market that that would increase the life of the field and that that therefore constituted a ground for spreading these excess costs all over the entire field. And my submission is that that constitutes no valid ground for compelling the North End producers to subsidize the South End producers, because the length of life of the field, as I see it, bears no relation to the lives of the particular wells of the clients I represent. And with respect to the other alleged benefits to the North End producers





T-4-1 3.45 P.M.

Argument by Mr. Saucier. - 7125 -

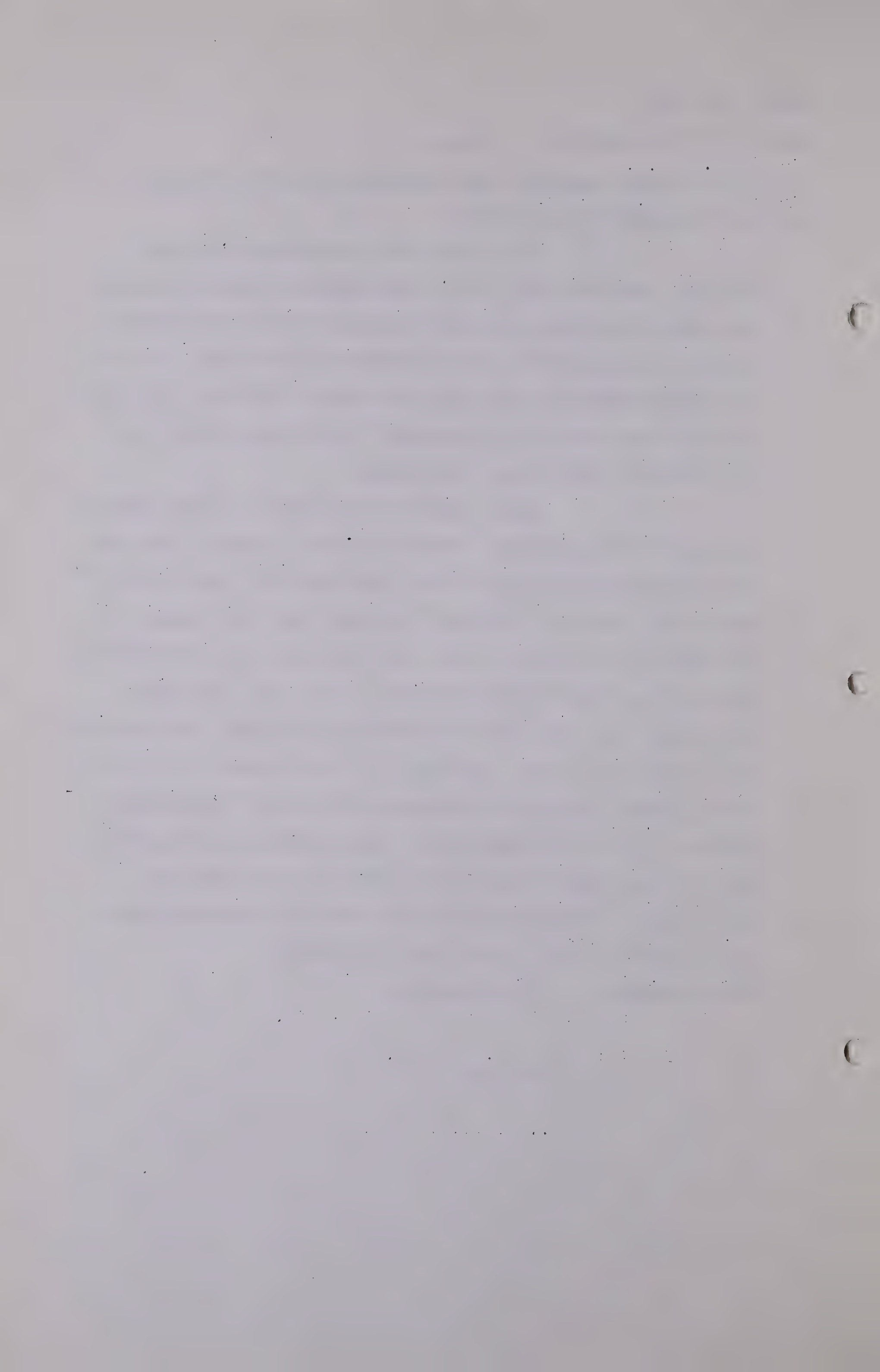
of having brought the South end gas into the market, I submit that they are illusory or negligible.

It is said that in some way that by bringing the South End gas to the scrubbing plant it reduces the cost of scrubbing and my submission is that the total volume of gas scrubbed in the scrubber depends upon the dry gas market demand and not upon the source from which the gas comes to the plant to be scrubbed. So it does appear to me that there is nothing to that point.

With regard to the opinion of Mr. Zinder referred to by my learned friend in which something was said about the commodity value of the gas being the same at one end of the field or the other, I submit that is a purely theoretical consideration and that the Board is not concerned with the so-called commodity value of the gas. In this particular case and for this particular purpose, my respectful submission is that the opinion of Mr. Zinder as described by my learned friend, Mr. McDonald, should not be accepted because it contains apparently a mere expression of opinion without any valid ground in support of it to compel the producers in the North end of the field to subsidize those in the South. That is my submission, sir.

THE CHAIRMAN: Mr. Mahaffy.

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Argument by Mr. Mahaffy.

- 7126 -

MR. J. C. MAHAFFY, K.C.: . Mr. Chairman, my learned friend, Mr. Steer, has very kindly consented that I may go ahead of him. I told him I would only take 10 or 15 minutes, so I am going to have a chance to prove it by getting through today.

I have very little to add to what has been said in the witness box by Mr. Scrimgeour and by what was set out in the submissions filed, particularly now that it is not necessary for me to say anything about the absorption plant operation. I come down then to our small share of the gathering system in the Valley and there are two features that I would like to address myself to. First of all, the valuation of the gathering system and secondly, the manner in which the cost of operating that gathering system should be divided. Now Mr. McDonald, sir, this morning spoke of an appraisal on which we based our submission. In a sense that was right but it is misleading to leave it that way because while our submission is based on the appraisal made by a recognized appraisal company, that is not the base on which we make our claim. Our claim is that we paid in value, in fact in cash, what is set out in that appraisal. In other words, the cost of our system to us is the figure set out in our submission. Now it is true that the consideration paid is based on that appraisal figure but that is the only connection that the appraisal has with the matter at the present time. In other words, we have actually paid the Gas & Oil Refineries the amounts that we have set out. Now I would like to point out, sir, that that change of ownership took place and that appraisal was made long before you even thought that you would be sitting here for a couple of years on this Hearing.

THE CHAIRMAN: It seems longer.



Argument by Mr. Mahaffy.

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MR. MAHAFFY: I am sure it does. But as I say, this was all done prior to the passing of the Act and prior to the setting up of this Commission. So that removes, I do suggest, any idea, might I put it this way, that we are doing any juggling with figures for the purpose of this Hearing.

Now, sir, the other theory which has been advanced is that these costs should be based on historical cost. Now there is something to be said for that, naturally. Mr. Hamilton prepared a statement of the historical costs and my learned friend, Mr. McDonald, would like of course to base the whole rate base on the basis of those figures. I am sorry, sir, that I am not able to refer you to the actual pages in the evidence because I have not been getting transcripts but I think you will recall, sir, that Mr. Hamilton, when questioned about this statement of his, admitted that costs were very much higher now than at the time when we made the installations and he also admitted, and I think it is common knowledge, that during the years that these installations were made a lot of equipment and in fact labor itself was going at fire-sale prices in Turner Valley. Mr. Hamilton was quite frank to say for that reason our historical costs were perhaps very low. Now Mr. McDonald says that our appraisal is very much higher than Mr. Hill would have fixed. I am sure my learned friend is omitting, however, the fact and I know he is from the figures he gave you, sir, and he observed that in the statement, Exhibit 171, Schedule A, he took his comparative figures this morning from that statement, but the very last item of the Schedule shows the deduction of 30% from the costs which are itemized. In other words whereas Mr. McDonald said our figures for laying three-inch



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Argument by Mr. Mahaffy.

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pipe were a dollar and forty-nine cents, actually it is 30% less than that and our cost is 1.04 cents. Mr. Hill's cost as I understand from my learned friend, for the same thing was 97.6 cents. So you see there is not very much difference between our appraisal and Mr. Hill's figure.

MR. McDONALD: Pardon me, I said that Mr. Hill's original cost, I mean undepreciated cost, was that and when you take off depreciation there would be 30% off that again, from the comparative figures I used.

MR. MAHAFFY: Did he allow 30% off?

MR. McDONALD: No, those are his original cost figures I used.

MR. MAHAFFY: These are the valuations with 30% deducted. I did not put in as an exhibit our appraiser's report but he explains various reasons why he has taken these figures and then knocked off 30%. I still contend, sir, there is very little difference between Hill's figures and our appraiser's figures.

Now in addition to that, sir, if I may borrow Exhibit 192. My learned friend has put in this afternoon 192. Unless I entirely mis-read the figures he set out in his exhibit, the cost of gathering gas by Madison is something over three cents a thousand; the cost of gathering gas by B.A. is also over three cents a thousand and the cost of gathering gas by us is slightly over a cent a thousand. Surely that does not show that we are running an exorbitant proposition which has cost too much either to instal or to operate. Our cost is just one-third of the others in the field.

MR. McDONALD: I might point out, Mr. Chairman, in the

Age Group	Percentage of Respondents
18-29	65%
30-49	75%
50-69	80%
70+	85%

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Argument by Mr. Mahaffy.

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G.O.R. figure I have not included the cost of compressing up to 325 pounds which is included in the 3.134¢ for Madison and the 3.236 for B.A.

MR. MAHAFFY: I understand there is very little compression before the gas enters the Madison Scrubbing Plant. Certainly there is no compression before it enters ours, although as you know ours is a low pressure plant.

THE CHAIRMAN: There is a suction line from your plant to the Madison and then compression from there to the scrubbing plant to 325 pounds is it?

MR. STEVENS-GUILLE: 375.

MR. MAHAFFY: Upstream from our absorption plant is the compression plant which is included in these transmission figures of 8 cents. But our gathering costs according to Mr. McDonald's figures - of course here is the way he says it should be and I say it should be higher - but he says it shows slightly over one cent and the Madison cost is slightly over three cents. All I am saying, sir, is that certainly does not indicate that our costs as set out by us in our operating expense are excessive. In other words, it does seem to me that they are very low. In that connection I would like to point out that the cost we submitted was 1.37 cents a thousand. As I mentioned, this Exhibit 192 would indicate, I think, that our costs are very, very reasonable.

Now for these reasons, sir, I do contend that we should be allowed a rate base on the basis set out in our submission.

And the next point is what rate of return should be allowed on that rate. I am not going to say anything about that, sir, except to say that occupying



Argument by Mr. Mahaffy.

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the small position we do in this general picture, we will of course accept whatever rate of return you see fit to allow to the others and I am not going to endeavour, with my limited knowledge, to say anything on that particular subject.

That brings us, then, to the question of allocation. If you choose to call it that, of the expense of operating this gathering system. Now we contend, sir, that through that gathering system comes a certain amount of gas and in accordance with Exhibit 171, we say that it costs 1.37 odd cents to transport each thousand cubic feet coming over that system. Mr. McDonald has prepared a statement which was put in this morning and in that we were apt to get away from the basic point as to how much it cost to put the gas through our gathering system, in this way that he first endeavoured in his allocation . . . . That is Exhibit 189 - he endeavours to allocate at the bottom of the page there, on the total expense basis if you might call it that, and then turns this total expense around in the way of the thousand cubic feet rate. Now examining his statement as we have done, Mr. McDonald was good enough to give me one of these two or three days ago, it brings up another point which I think should be given consideration and if I may I would like to put in an amended allocation, it is called.

AMENDED ALLOCATION NOW MARKED  
EXHIBIT 193.

(Go to page 7131)



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C-5-1 - 4.00 P.M.

Argument by Mr. Mahaffy.

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Now, Mr. Chairman, the significance of this statement I think is that it brings to the fore the question of the fact that gas is flared and that there is shrinkage in the gas going to the plant.

You will notice that we start out with the total gas put through the line and we deduct the flared gas which is flared through no fault of ours, and the shrinkage, and then we take the percentage of the remaining gas and divide that gas between the absorption plant, 609,304 MCF, and the gas sold for well operations, that is the gas sales to the consumer, the most of which of course goes to the Madison, 1,696,704 MCF.

On that basis the absorption plant has used 26.42% of the gas. The balance of 73.58% enters the consumers' line. It should be noted, sir, that that 26.42% figure as explained in the note at the bottom is now considerably reduced since the gas used in the expansion power units at the plant has been eliminated and that the normal consumption there will be approximately 15%.

Now taking that percentage, that position, - first of all, on Mr. McDonald's historical cost basis, which we say is not the right one, it works out at a cost per thousand feet of .9306 cents, which is a little less than Mr. McDonald's figure, but taking our cost submission, which we submit is correct, it works out to 1.9006 cents for the balance,

Now as I say the additional point which comes out in this statement, sir, is the flared gas and we contend that that deduction should be made before the division of the cost is made, in other words, that the whole cost of transmitting gas which is flared should not be borne by the

The first part of the paper is devoted to a discussion of the

main results of the paper, which are summarized in the

following theorem. The proof of this theorem is given in the

next section. The final section contains some remarks and

conclusions. The paper is organized as follows. In the

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next section. The final section contains some remarks and

conclusions. The paper is organized as follows. In the

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Argument by Mr. Mahaffy.

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absorption plant, that the marketable gas should bear its percentage, its share of the cost of transmitting that flared gas and that shrinkage gas, if you can call it that, over the gathering system.

Consequently our brief, sir, is amended to that extent, to incorporate that idea and raises our cost of gathering gas from 1.37, as in the original brief, to 1.90 as shown in the Exhibit which I have just filed.

Now I think that is all that I have to submit, sir. Those two points, first of all, that there is every reason to justify our rate base submission and secondly, that in view of the flared gas and the gas shrinkage, that the relative costs should be increased as now shown in our present submission to 1.9 cents, that is as shown in Exhibit 193.

THE CHAIRMAN: That of course involves that the people of Calgary must pay the cost of transmitting that gas which is flared, from which they obtain no benefit. Now why should not the well owner bear at least some of that expense?

MR. MAHAFFY: I realize that, sir, but the point is the wells are produced in accordance with Government orders and allowances and it so happens that the compressor equipment, which has been installed by order of the Board, is not sufficient to handle all the gas that is permitted to it. The absorption plant is not a public utility but the gathering system is, and then we cannot put it in the market line. Now, is that not part of the general scheme of things? The Board in its wisdom felt it better to put in smaller units and I feel it is wise, but should we have to bear the cost of transmitting that flared gas when, it is part of the general scheme, and I submit if it is part of the general scheme then

1. Introduction

2. Methodology

The first part of the study focuses on the theoretical framework and the research objectives. It discusses the importance of understanding the underlying mechanisms of the phenomenon being studied and the need for a systematic approach to data collection and analysis.

The methodology section describes the research design, including the selection of participants, the instruments used for data collection, and the statistical methods employed for data analysis. The study is a quantitative research design, aiming to test the hypotheses derived from the theoretical framework.

The results section presents the findings of the study, organized into several sub-sections corresponding to the different hypotheses. The data shows a significant positive relationship between the variables, supporting the theoretical model. The discussion section interprets these findings in the context of existing literature and offers suggestions for future research.

The conclusion summarizes the main findings and the contributions of the study. It highlights the theoretical and practical implications of the research and acknowledges the limitations of the study. The study concludes that the proposed model provides a useful framework for understanding the phenomenon under investigation.

Argument by Mr. Mahaffy.

- 7133 -

it should be part of the general costs.

THE CHAIRMAN: You get the revenue from the natural gasoline ?

MR. MAHAFFY: We do that, that is right, sir, and we are quite prepared to pay our proportionate share of the cost of transmitting that natural gasoline. As a matter of fact, as you know, Mr. Chairman, we have a contrary idea altogether and that is that we should bear the cost of transporting everything to the absorption plant and that the things that come out of the absorption plant are by-products to be dealt with accordingly, but I realize that we came forward with that suggestion rather late in the game and perhaps it is not going to be the course which will be followed.

MR. FENERTY: Where did you get that impression ?

MR. MAHAFFY: That is the impression which I gained although I may be speaking out of turn. It may be too early to suggest that, but I am arguing now on the basis that it is not adopted and that we have to apportion these products at the well head.

THE CHAIRMAN: No matter what I may have said from the beginning of this Hearing to the end, if you are trying to draw a conclusion as to what I think or what I may do - -

MR. MAHAFFY: I am not trying to draw a conclusion from either what you have said or what you have done, but I think the whole thing here is based on the theory of endeavouring to fix the cost of transporting the dry gas from the well to the consumer.

MR. FENERTY: You have not been here all the time.

THE CHAIRMAN: And I am hoping to hear Mr. Fenerty in a couple of days on that.



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Argument by Mr. Mahaffy.

- 7134 -

MR. MAHAFFY: But I say, if you do not adopt that theory which is set out in our Exhibit 171, and it is necessary to divide the material that goes through the plant, then I do say that we should not bear the whole expense of the flared gas and the shrinkage.

Now I see I have already exceeded my time by six minutes, so I had better sit down.

THE CHAIRMAN: Seven minutes, Mr. Mahaffy.

We will now adjourn.

(The hearing was here adjourned to be resumed at 10 A.M. on Tuesday, June 18th, 1946.)





Argument by Mr. Mahaffy  
Exhibit 193.

- 7135 -

Exhibit 193

AMENDED ALLOCATION OF  
GAS GATHERING COSTS  
SUPPLEMENTARY TO D. P. McDONALD'S  
FIGURES OF JUNE 13, 1946.

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Wet Gas Intake 1945		3,394,114 m.c.f.
Deduct Flared	707,575	
Deduct Shrinkage	<u>380,531</u>	<u>1,088,106 m.c.f.</u>
TOTAL TO ACCOUNT FOR		<u><u>2,306,008 m.c.f.</u></u>

# Absorption Plant Operations	609,304 m.c.f.	26.42%
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Sold for account of Well Operation:

1. Madison Nat. Gas Co. Ltd.	1,342,144		
2. G.O.R. Crude Operations	<u>354,560</u>	<u>1,696,704 m.c.f.</u>	<u>73.58%</u>

TOTAL TO ACCOUNT FOR		<u><u>2,306,008 m.c.f.</u></u>	<u>100%</u>
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	<u>D.P. McDonald Historical Basis</u>	<u>G. O. R. Appraisal Basis</u>
Total Annual Costs	\$ 21,460.00	\$ 43,828.42
73.58%	15,780.27	32,248.95
Volume to Market	1,696,704 m.c.f.	1,696,704 m.c.f.
Per m.c.f.	0.9306 ¢	1.9006 ¢

# This figure higher than normal due to a large quantity of Gas used in EXPANSION POWER UNITS during January and February 1945. Normal consumption approx. 15%.

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